ASTOUNDING

JAN. '43

Science-fiction 25c

OPPOSITES REACT

by

WILL STEWART

JANUARY·1943

A STREET AND SMITH PUBLICATION

CHILLED? SNEEZING?

LOOK OUT FOR COLDS AND SORE THROAT

LISTERINE—*Quick!*

It may nip the trouble in the bud

AT the first sign of chill, or sneeze, start gargling with this wonderful antiseptic.

Excitement, fatigue, raw temperatures, cold feet, may lower body resistance so that threatening germs can invade the tissue and set up or aggravate an infection.

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That's why it is wise to gargle with full strength Listerine Antiseptic at the first hint of trouble.

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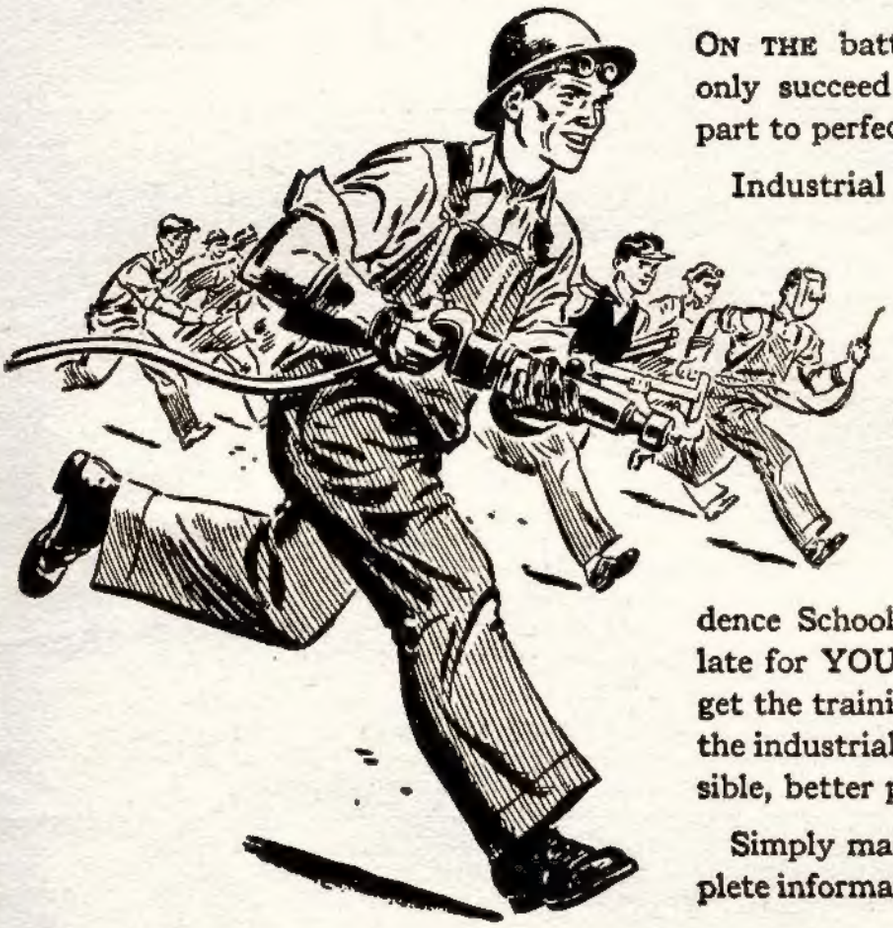

ON THE battlefield, daring "hit-and-skip" raids can only succeed when every man is *trained* to do his part to perfection.

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Contents for January, 1943, Vol. XXX, No. 5

John W. Campbell, Jr., Editor, Catherine Tarrant, Asst. Editor

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First of Two Parts. Whether human or atomic, opposites react. And when all the Powers of High Space sought the secret of handling and controlling the mighty reaction of seetee and terrene matter—there was bound to be plenty of both reactions!

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Concerning Purely Personal Preferences.

Cover by William Timmins

Illustrations by Fax, M. Isip, Kolliker, Kramer and Orban

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RE RAYS

When a military man talks of *firepower* he's talking of a form of power that isn't normally considered as something to be measured in terms of watts, horsepower, or ergs per second. It's usually measured in terms of weight of destructive metal and explosive shot out per minute. But firepower can be measured in terms of horsepower, too. There's the question of recoil, a not very important matter when you've got your gun anchored in the pragmatically infinite mass of the Earth, but a major item for an airplane. When a modern fighter cuts loose with all its machine guns and cannon firing straight ahead, there's a rearward recoil equal to the thrust of a five-thousand-horsepower engine, about twice as much engine as any fighter now made can carry into the air. A machine gun is, after all, an interrupted rocket.

It is also an internal combustion engine, of one cylinder, two-cycle design that throws away its piston on every cycle. As such, its power comes out to an astonishingly large number of hundreds of horsepower. Modern propellent powders pack a tremendous punch in that little brass cartridge tube, a very compact, convenient and manipulatable sort of concentrated and packaged energy. The mechanism for releasing and utilizing that energy in a destructive, directed way is simple and rugged.

Which may be part of the answer to the lack of a death ray, heat ray, or disintegration ray. A death ray might conceivably be a sort of catalyst—a peculiar form of energy, very little of which could upset the delicate chemistry of life. But a heat ray, if it's to be dangerous because of its heating effect, means energy, and more particularly power—rate of energy release—in large gobs. A disintegration ray supposedly implies a ray capable of making solid, strong metal fall to dust, or, going further, making the atoms of the metal collapse. If it makes metal fall to dust, it is supplying energy sufficient to break the powerful intermolecular bonds that lock the crystals of the metal together—it's not merely breaking the tough steel cable in one place, but in a near-infinity of places. If you think that doesn't require a stupendous amount of hard work, try it on your own piano wire; that type of disintegration ray would use up an appalling amount of power in an appallingly inefficient way.

The atom-disintegrator ray we can't make yet, certainly, or even closely approach. If we could, it might not work the way you would like it to. Smashing atoms yields enormous amounts of energy, so such a ray might seem to be possible on a basis that gave off energy rather than absorbing it in quantity. It might be—on certain selected types of atoms. U-235 atoms, for instance. But remember the old and well-known—to science-fiction—fact that four atoms of hydrogen combine to make one atom of helium with a release of tremendous energy. What sort of essence of energy are you going to have to pour into the ray that will smash helium atoms back to hydrogen? And helium atoms can, apparently, combine to form more complex atoms still, with a further release of energy!

Rays would have difficulties on the basis of sheer power-supply. Except—how about that catalytic death ray?

We know of one such radiation now—and use it. The Sterilamp is a special mercury vapor arc in a special tube that emits radiation of about twenty-five hundred angstroms which have the property of killing bacteria exposed to it almost instantaneously. A lamp of only three-watts power is instantly deadly to even very tough bacterial forms.

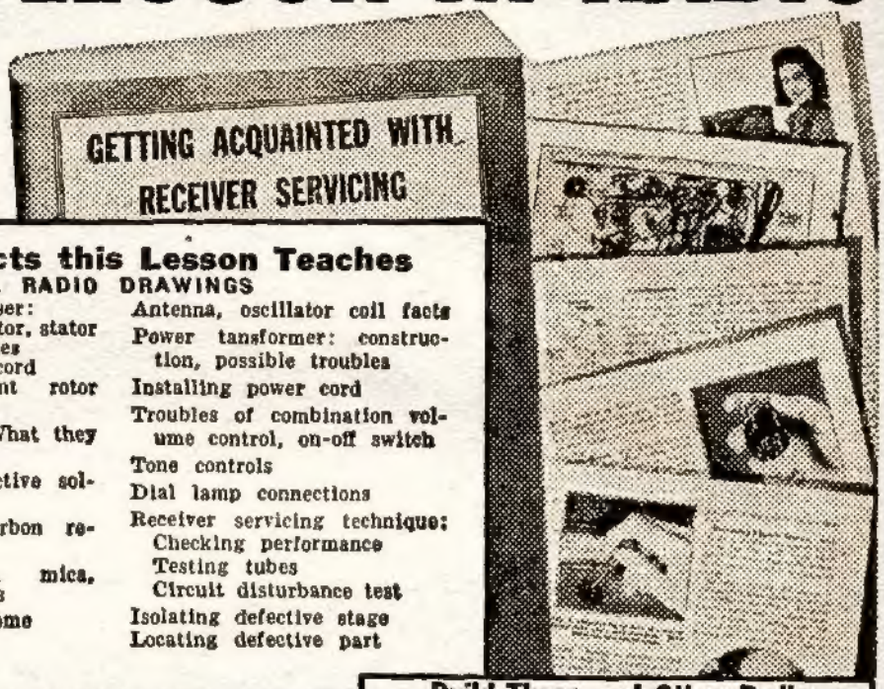
But it won't give a man a sunburn, or cause detectable tanning of the skin. And our atmosphere happens to consist of gases that, in the presence of any real concentration of such radiation, is converted to ozone, which is as transparent to that radiation as so much cast iron. Air is remarkably opaque stuff—except to a very narrow band of the total spectrum which naturally includes the visible region. Life evolved under those conditions; obviously it had to pick the available wave lengths. Air is heavily opaque to ultraviolet, X ray, gamma and cosmic radiation. The latter leaks through by sheer blazing force, just as you can get light through a man's opaque flesh if you start with enough light.

The air kills any radiation shorter than the visible; metal walls, even thin metal walls, will ground out and kill any radiations much longer than the visible—until the metal walls are smashed by the sheer power of the attacking energy. The answer would seem to be unadulterated, unspecialized force. You can't sneak in by any scheme based on knowledge as of today, you must blast in.

Which a powder-impelled metal slug does with admirable neatness and dispatch. No tricky gadgetry to generate, control and direct the super-dooper ray-energy, no need to cart a generator around. No finesse about it, either. But a .50-caliber slug from a machine gun aboard a Flying Fortress has proven to be an excellent instrument for instructing Nazi and Jap fliers in good manners. There's no finesse about them, either, but they can understand the impact of a high-velocity slug.

The Editor.

FREE LESSON IN RADIO



Here is a Partial List of Subjects this Lesson Teaches

WITH 31 PHOTOS, SKETCHES, RADIO DRAWINGS

How superheterodyne receivers work

How to remove tubes, tube shields

Three reasons why radio tubes fail

Electrodynamic loudspeaker:
- How it works
- Replacing damaged cone
- Recentering voice coil
- Remedies for open field coil

Output transformer construction, repair

Gang tuning condenser:
- Construction of rotor, stator
- How capacity varies
- Restringing dial cord
- Straightening bent rotor plates

I.F. transformers—What they do, repair hints

How to locate defective soldered joints

Inside story of carbon resistors

Paper, electrolytic, mica, trimmer condensers

How condensers become shorted, leaky

Antenna, oscillator coil facts

Power tansformer: construction, possible troubles

Installing power cord

Troubles of combination volume control, on-off switch

Tone controls

Dial lamp connections

Receiver servicing technique:
- Checking performance
- Testing tubes
- Circuit disturbance test

Isolating defective stage

Locating defective part

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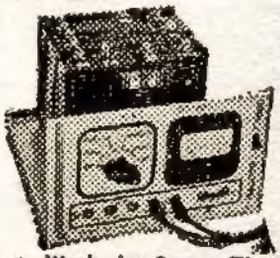

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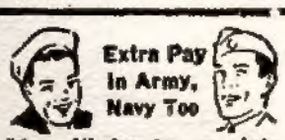

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OPPOSITES—REACT!

By Will Stewart

First of Two Parts

● Sequel to "Collision Orbit" and "Minus Sign," this novel tells of men against men—and against the strange and deadly problem of minus matter, contraterrene matter. Men against men—for the men who learned the trick of fixing a tool to work "seetee" in a baseplate of normal matter, could wrest control of the System!

Illustrated by Kolliker

"Captain Paul Anders!"

Announcing him, the aid's curt, impersonal voice made a hollow echo in the enormous metal room ahead. Lean and spare in the black of the High Space Guard, he came to straight attention. He knew the man before him in the glittering official room, and he was prepared for a trying interview.

"At ease, old man!" Austin Hood, Chief Commissioner of the High Space Mandate, returned his crisp salute with a genial, unmilitary gesture. Beyond the shimmer of the famous iridium desk, Hood was red and bulky, loud with a bluff assurance. "Glad to see you back here on the rocks. Sit down and tell me all about your leave."

Hood's red fat face was smiling, with a politician's ready smile. But his small eyes remained shrewd and cold—they were used to judging men,

Anders thought, like pawns to be played. His hearty, booming voice gave Anders no time to tell about the leave.

"Five years since I've been back to Earth. How'd you find the sea food at Panama City? Go down to the Ocean Room? What I miss the most, out on these damned dry rocks. Sick of canned and dried and frozen food. For just one oyster plate, with old Armand's sauce, down under the dome of the Ocean Room—"

His fat shoulders heaved to a gigantic sigh.

Anders sat down on a hard metal chair. He saw his application for retired status, lying alone on that bright expanse of costly metal, and caught his breath to speak about it. But Hood's loud public voice boomed on:

"Glad to see you reporting so fit for duty, captain. Must have been quite an ordeal you went through, on that runaway asteroid. Ametine shock, internal injuries, fractured arm." His small, watchful eyes studied the tall man in black. "See the Earth has bleached a little of the space-burn out of you. But you spatial engineers are a hearty lot—and damned lucky for Interplanet. Because I've got a new job waiting for you."

"Moment, commissioner." Anders nodded gravely, at the paper on the desk. "See you have my application for retirement. I want to leave the Guard and Interplanet."

Hood swung forward heavily in his big metal chair. His eyes were hard and calculating. "Our doctors report you fit as ever." Now his voice was eloquent with scorn. "Did you lose your nerve along with your ship on that peculiar rock?"

Anders tried not to get angry, because he knew that was what Hood wanted.

"No." He shook his dark head slowly. "But I've had six months of nothing much to do but think. S'pose my viewpoint changed. I've worked ten years for Interplanet. Now I want to open an office of my own, as an independent consulting engineer."

"You can't quit Interplanet." That was a loud assertion. Hood rocked back on the springs of his noiseless chair and smiled his red, genial smile again. "Because it's in your blood. I know your people, captain. Spatial engineers, for three generations."

Anders tried to interrupt, but Hood ignored him.

"Your family has been loyal to Interplanet. And Interplanet has repaid you with the wealth of space. Maybe some of the old space families have gone to seed, but you haven't, captain. You have served us ably, from Venus to Callisto. One of our top-flight spatial engineers. We can't let you go."

Anders hesitated, frowning.

"Interplanet used to be a sort of shining religion to me," he said slowly. "But now I'm not so sure of things."

"Nonsense!" Hood's red face turned redder, and his red fist banged the bright iridium desk. "You've just been mooning around the hospitals too long. A tour of active duty will snap you out of it. Your record shows that you are neither a coward nor an idealistic fool. And, remember, you're still under my command."

"Yes, sir," Anders said.

"But you must realize that Interplanet is now in grave danger, captain." Hood's pliant voice turned back to conciliation. "You know the Mandate is only a makeshift crutch, invented after the war to prop up peace among the planets. You can see that it's already beginning to totter. When it falls we'll have Mars and Venus and the Jovian Union at our throats again. I'm on the inside, here at Pallasport, and I can see things getting blacker for Earth and Interplanet every day. You're an Earthman, first, captain. You can't desert your native planet in the middle of this emergency. You don't mean that?"

"No." Anders sat straighter, lean and ready in the black. "Not when you put it that way, commissioner. I don't much like the Mandate, but I can see it's better than war. Consider my application withdrawn.

"And what are my orders?"

"Knew you'd see your duty, captain." Beaming genially, Hood opened a platinum humidor. "Have a cigar. Handmade, and fresh from Cuba. Get them duty-free, y'know, in the diplomatic mail."

Anders held the blond cigar unlit, waiting.

"Your job's a simple one." Exhaling blue smoke, Hood waved his cigar expansively. "You can guess what it is, because you're the only competent contraterrene engineer we've got in the service. All you have to do is—get seetee for Interplanet."

Anders didn't move. He knew about the contraterrene drift. He knew that seetee was a key to illimitable power, both physical and political. Because a pebble of it, in contact with any normal matter, reacted with the energy of a ton of detonating tritonite. He also knew why spacemen called it hell in chunks.

"Don't you think it can't be done!" Hood peered shrewdly at his stiff brown face. "Because somebody is going to get seetee—soon. Biggest thing since paragravity. Whoever gets it can smash the Mandate like a seetee meteor colliding with a ship. It had better be us!"

Anders nodded gravely. If the flood of flaming power from that matter-annihilating reaction could be tamed and controlled, he knew what it would mean for the arts of war and peace. But he also

knew the heartbreaking difficulties still in the way.

"You've got to win the race." Hood's voice was a throbbing, oratoric drum. "Because it means another hundred years for Interplanet. It means a new empire that can reach out to Pluto and Persephone. It means more billions than you can imagine—and Interplanet can be generous, captain."

The spare black shoulders merely shrugged. Anders intended to try his best to complete one more job for Interplanet, but he found no inspiration in the commissioner's dream of a reborn interplanetary empire. As for himself, he had already made money enough.

"You'll have competition." Hood's loud voice boomed on. "The Venusians and the Jovians are in the race, as well as these damned asterites. Nobody can find exactly what the Martians are up to, but here's one clue you may find interesting."

He opened a locked drawer in the huge bright desk and took out a small stereo-viewer. Snapping a reel of film into place he slid it across the shimmering metal. Anders picked it up, wondering.

"That film came out of the vaults of the Martian commissioner." Hood made a red, hearty grin. "It lost me forty thousand Mandate dollars, but I imagine old Muhlbacher would give a million to have it back. Go ahead and run it off."

Anders put the little instrument to his face and pressed the stud to start the quiet mechanism. The film showed a view of space with the stars magnified to tiny, colored halation disks on a field of frosty black. A meteor was tumbling across the field, with the Sun glinting on it. As it came hurtling nearer the camera, he saw that its shape was peculiar.

"What's this?" he whispered suddenly. "Looks like a needle—a golden needle!"

The mechanism hummed with a muted vibration, and the spinning object came nearer in the lenses. Glancing in the sunlight, it was hard and real against the gulf of infinite night. The larger end was jagged, as if it were the broken tip of something longer.

"Eh!" Anders caught his breath. For a tiny human figure swam before the camera, disguised in bulky, silver-painted, dirigible armor. Its nearness brought the other object into startling stereoscopic perspective.

The needle was huge. It must be a hundred meters long, Anders estimated, from glittering point to jagged base. Probably five meters thick, through the base.

The man in space armor flew to the large end, and the camera followed him. The needle was hollow, Anders saw. The Sun swept in as it spun. He glimpsed a spiral ramp, winding up inside the hollow shaft, with a silver-colored hand rail above it.

Something was queerly wrong about that ramp and railing. For a moment Anders felt a dull oppression of bewilderment. Then, with a sharp little start almost of apprehension, he realized what was the matter. The sloping ramp was too narrow. The railing, in proportion, was far too high.

He put down the instrument to stare into Hood's shrewd eyes. His clipped Earthman's voice held a tremor of controlled excitement. "That's a nonterrestial artifact. That footway wasn't intended for men!"

"But you haven't seen the half—look again!"

He started the film again. Now the camera and that bright-armored man had retreated a full kilometer from the golden needle. The man was aiming a spatial automatic. After one puzzled moment, Anders understood.

"Couldn't be!"

He gasped that stunned protest. For he knew that contact was the only test to distinguish the contraterrene type of matter, and a shot was the routine testing procedure. If the annihilated bullet exploded like a hundred kilograms of steel-cased tritonite, it would mean—something impossible!

The gun jerked back against the armored hand. It made a tiny spurt of yellow against the black of space. Watching desperately, Anders must have forgotten where he was, for the silent, incandescent blast made him duck. The short film ended.

"Well?" Hood demanded. "What do you make of that?"

"'Stounding!" Anders stared at the mirrorlike desk top, trying to organize his thoughts. "I know the theories, that the drift was formed when a wandering seetee body collided with the old trans-Martian planet. But I never imagined—beings! That needle would seem to be an artifact—think of it—of contraterrene life!"

"Our Martian rivals evidently made the same inference." Regarding his visible excitement with a sly twinkle, Hood commented triumphantly, "Now, captain, you don't seem quite so anxious to open an office of your own!"

"Seems you always win, commissioner." Anders grinned, and started asking eager questions. "But who took this film? Where? What was the orbit of that object? What became—"

"Hold on, captain." Hood held up his huge red hand. "Your other questions will be part of your job. But the sources from which I bought the film informed me that it was taken by a Martian-German agent, who uses the name of Franz von Falkenberg."

"Von Falkenberg?" Anders frowned. "I almost remember—"

"Maybe you heard his name at the treason trials." The commissioner leaned forward gravely. "He was back of that plot, you know, to steal our range finder for the Martian Reich. All the others were sentenced to life on Pallas IV, but von Falkenberg was smart enough to get away. We don't even have a good description of him."

"I remember now." Anders nodded suddenly. "That happened while I was on special leave, building a uranium refinery for the Jovians, on Callisto. And I've seen a book of von Falkenberg's—a mathematical analysis of the orbits, to find the origin point of the drift."

"Top-drawer spatial engineer," Hood said. "Besides which, he's a trained soldier and a fanatic Aryanist—waiting for the first chance to rewrite the Treaty of Space in blood. Preferably Earthman's blood. Better keep him in mind."

"Done, commissioner." Anders grinned. "Now what?"

"Your tour of duty will begin at once." Hood returned the little viewer and its film to the locked drawer. "You will retain your nominal status as a captain in the Guard, because that will attract the least attention."

Anders nodded.

"Our inside organization is behind you," Hood went on. "Of course you can expect some trouble from the alien elements in the Guard. But we've already made arrangements for a ship—the cruiser *Challenge*, just commissioned at the yards on Pallas II—with a crew we can trust to be loyal."

Anders made another brown grin. "Traitors, you mean."

Hood's red face showed pain.

"Loyalty to Interplanet is no fit cause for levity," he said stiffly. "Not even when it does involve technical treason to the Mandate. You know the Guard."

Anders nodded soberly, for he did know the High Space Guard. The Treaty of Space stipulated that the Guard, like the Mandate Commission, must be formed on a ratio of two men from the Earth-Moon Union, and one each from Venus, Mars, and the Jovian Soviet. All were required to swear allegiance to the Mandate. But many, like Franz von Falkenberg—and Anders himself—remained loyal to their native planets. "Strip a guardsman," cynics put it, "and you'll catch a spy."

Now, supposing the interview had ended, Anders rose. But Hood motioned him to wait, and took up a small clip of papers from the iridium desk. Scanning them, the commissioner said briskly:

"Your first task will be to find out what these damned asterites are up to. This old Drake and his son have claimed an airless rock, Freedonia, and set up what they call a metallurgy lab. Prob'ly they're working on seetee, right here under our noses."

"Likely," Anders agreed. "I know young Drake."

Rick Drake had saved his life, Anders reflected, when they met on that runaway asteroid. Because of that incident, he still regarded the young asterite engineer with a perverse hostility.

"Worst thing, my own niece has joined them!" Hood cleared his throat with a sound like an angry bellow. "My own flesh and blood—but I can't do a thing with her. She has opened an office for them, right here in Pallasport. But you met Karen?"

"I did." Anders shrugged with a rueful brown smile. "Most beautiful and charming young woman. First thought we were fellow cosmopolitans. But seems she preferred Rick Drake."

"Damned asterite!" Hood's fat face was crimson. "And Kay had the confounded nerve to announce her engagement to him." The small eyes turned shrewd again. "Get seetee, and maybe you can win her back."

"Not a chance," Anders said. "She's in love with Rick."

"I was hoping you could manage her." Hood sighed regretfully. "Seems able to outsmart every move we make, against the firm of Drake, McGee & Drake. And I used to think pretty girls were dumb!"

Thinking of Karen's flame-colored hair, Anders said nothing.

"Visit Freedonia," Hood went on. "Young Drake is mostly there, working with his father in this mysterious lab. The old man is the pioneer contraterrene engineer, you know—invented the seetee blinker. And you'll investigate two other asterites with the Drakes."

His fat, pink fingers riffled the papers.

"One is a girl named Ann O'Banion. Comes from little Obania. Daughter of a decayed asterite politician. Both she and her father suspected of connection with the Free Space Party, but we never got any evidence. If you can find a pretext, ship them both off to Pallas IV."

Anders made quick notes on a tiny pad.

"Your other suspect is an old rock rat, known as Rob McGee. Skipper of the *Good-by Jane*, a broken-down space tug. He's at Pallasport now, having a new engine installed and taking on a cargo consigned to Ann O'Banion, on Obania—but prob'ly really intended for this lab on Freedonia. Here's a copy of his manifest."

"I've met McGee." Anders spoke with remembered awe. "Maybe just a rock rat—but a mighty queer one. Tell you the time to the second without a watch. Or glance at a meteor a thousand kilometers off and tell you the distance to the fraction of a meteor, and the mass to the nearest kilogram. Eh?"

He had been scanning the blurred, flimsy carbon of the tug's manifest. He caught a surprised breath, and his gray eyes looked quickly across the desk.

"McGee isn't bound for Obania." His black shoulders drew straight. "Nothing here for any sort of lab. Not even any regular fuel uranium. Just tons of the special twelve percent concentrate, for that new engine, and other supplies for the ship."

Hood's small eyes blinked.

"Then you better find out where he is going!"

"Zactly." Anders folded the thin yellow sheet and moved to go. At the door of the huge metal room he turned back, grinning. "So I'm the man who came in here to retire? Seems you're invincible, commissioner!"

"Unless I meet my attractive niece." Hood's red face turned serious. "Better watch her, captain. Break a letter of the law and it will take a million dollars' worth of Interplanet legal talent to keep her from shipping you to Pallas IV."

II.

Anders hurried back into the curving street. He mounted the swell of the terraformed hill that lifted Pallasport like a bright glass-and-metal knob above the untamed waste of the minor planet. Above the glittering piles of the governmental buildings, he came striding up to the spaceport on the crown of the hill.

On the floodlit field, under the crystal dark of the night sky, he found the *Good-by Jane*. Leaning askew on her battered ground gear, the little tug resembled a tall steel box balanced precariously on end. Beside the open valve, Rob McGee stood watching stevedores unload the yellow-painted cadmium cans of fuel uranium from a backed-up truck.

A sturdy, wide-shouldered figure in his ancient greenish space coat, the master looked small and and ugly and indestructible as his vessel. He signed a receipt for the fuel metal, and the truck departed. Then he turned calmly, drawling:

"Hello, Captain Anders."

"Glad to see you, McGee."

Smiling, he offered his hand. McGee shook it, very solemnly. Then there was an awkward pause. Somehow, Anders thought, he must have lost his old careless ease on that runaway rock. Because, for a moment, he couldn't think of anything to say.

He really liked McGee—that was the difficult thing. He felt a keen, wondering interest in that strange perception of space and time that made McGee the born spaceman. And he pitied the little man's loneliness, set apart by his own strange gift.

He liked McGee, but now they were enemies again. It might soon be his duty to take the odd little spaceman and his asterite friends to Pallas IV—for secret contraterrene research could easily be construed as treason against the Mandate.

But McGee, himself, seemed quite at ease. His square, space-beaten face had a look of mild interrogation, but he was calm as his native stars. Silently, he began to fill a short black pipe.

Trying to seem casual, Anders lit a cigarette. He glanced up at the rusty hull.

"Hear you've installed a new engine?"

McGee nodded, uncommunicative.

"My fault your old one was damaged, on that runaway rock." Anders felt apologetic. "All a misunderstanding." Suddenly he envied Hood's thick-skinned bluffness. "What's your acceleration rating now?"

McGee told him, briefly, "Nine hundred."

"Eh?" Anders stared at the square, battered hull. "So now you've got nearly the speed and the range of a modern cruiser. Engine must have cost a lot of money?"

McGee lit his pipe, then admitted:

"We've got money."

"I know," Anders said. "I saw those kilograms of terraforming diamonds that you and young Drake found on the runaway. Perhaps you're looking for more?" He glanced at McGee's stubborn face. "Where are you bound?"

"Cleared for Obania."

"I know." Anders grinned. "But I happened to see your manifest. Notice you're loading mostly twelve percent concentrate for that new engine—enough to take you a hundred times that far."

The space-tanned mask didn't change.

"Where do you think I'm going?"

"Might be looking for something." Watching through narrowed steel eyes, Anders tried a shot in the dark. "You might be on the track of something very strange and old? Maybe a bit of the seetee drift, that was shaped a hundred thousand years ago—by beings with contraterrene tools?"

That changed the mask, with a hurt expression that made Anders somehow uncomfortable. The squinted eyes blinked. But the seamed square jaw set again on the stem of that short black pipe.

"I'm not talking," McGee drawled softly. "If you've got any more questions, captain, you had better come along to our office and see the manager. Miss Hood does all our talking now."

"That's all right with me," Anders agreed willingly. "But the Guard will have to know where you're bound."

McGee locked the valves of his ship and they left the swelling field. Determinedly, the little spaceman said nothing more. His small feet hurried nimbly, to keep up with the strides of the lean spare man in black.

Anders was thinking of Karen Hood, his brown face faintly smiling. He had always known, really, that he didn't have a chance. Rick Drake had always been the one, that bronze-haired, incoherent giant. And that fact no longer hurt him now. Yet he was conscious of a tingling eagerness at the thought of seeing Karen.

Drake, McGee & Drake occupied a small but modern building just below the field. An austere fluorescent sign glowed above a chaste façade of satiny platinum. The effect, he thought, was even swankier than the huge, expensive pile of the new Interplanet building. A haughty blond reception girl let them into Karen's office.

The office was stunning. It was big enough to berth a ship, and walled with mellow-tinted fluorescent glass. The sleek furnishings were silver and black obsidian. But the most stunning item was Karen herself.

"Paul—I'm so glad!"

Cataclysmic even in her severe green business suit, she utterly eclipsed the receptionist. She came eagerly around the immense busy desk to give him her strong cool hand. Her red hair had the same intoxicating lights, and the way she walked was still music, and her eyes were bright with pleasure.

But he saw the big photograph over her desk, in the shining obsidian frame. Rick Drake grinned at him, the lean and awkward bronze-haired giant. Anders made the photograph a graceful little bow even as he took her hand.

"Congratulations, Kay!"

She followed his eyes to the picture and he saw the devotion on her high-cheeked face. Her fine skin flushed a little, and her warm expression made a sharp little throb in his throat. But he had always known that he didn't have a chance.

"Some swank!" His eyes swept the room's chaste splendor, and indicated the departing receptionist. "Anybody'd think that Drake, McGee & Drake had bought out Interplanet."

"Good idea!" Her laugh was a bright little bell. "Sit down, Paul, and tell me how you enjoyed home. Looking well again. Don't you want a job? We need another good engineer, and I think there's room for your name on the sign."

"Wish I'd seen you sooner." Anders tried to smile, but suddenly he felt as awkward as young Rick Drake. "But I've just taken on a new assignment for Interplanet."

"Oh!" It was a cool, hurt sound.

Rob McGee had been standing in the gleaming doorway, calm and shabby and silent, smoking his old black pipe. Now he took it out of his mouth, drawling quietly:

"You see, Miss Karen, Captain Anders got to asking questions. He wants to know where I'm bound, in the *Jane*. He thinks I'm loading too much fuel, for Obania."

Karen's fine nostrils widened as she caught her breath.

"Couldn't help wondering." Anders grinned, watching her startled face. "Heard rumors of some seetee artifacts, dating from before the Cataclysm. Thought McGee might be looking for them."

The color flowed out of her sensitive skin.

"You win, Paul." Her marmoreal shoulders made a flowing shrug of surrender and she turned to McGee's uncompromising face. "Go back and get your logbook, Cap'n Rob. It's lunch time, and we'll be at the Mandate House. Hurry!"

McGee made a squinted blink and then went out deliberately.

"Clever, Paul." She smiled at Anders, with flattery in her wide blue eyes. "Now, seems we'll have to tell you everything. Quite a thrilling story, but a long one. And I don't think Rick would mind . . . I mean, he wouldn't really quite die . . . if we have lunch together, just once more, while we talk."

Anders bowed to the photograph again and held Karen's coat. It was white Callistonian fur, as swanky as the office. Her candid eyes were bright, and he wanted to touch her flame-colored hair.

They went to the Mandate House and sat at a quiet back table. Karen selected a steak for Rob McGee, and a waiter took their orders. They waited for the little spaceman. Karen was very charming.

But Anders grew impatient.

"'Stounding thing!" He tried to hurry her story. "Even the professors, with all their theories of the Cataclysm, never dreamed of contraterrene life. What do you s'pose they were like—those beings?"

Karen gracefully stirred her tea, and his voice went deep with a wondering awe.

"Y'know, when you think of those queer fragments of their shattered planet, drifting in space since before the time of men—it does something to you." He looked sharply into her wide blue eyes. "How did you come to find them?"

"Cap'n Rob's story." She looked expectantly toward the door. "Quite a thriller, too. Mustn't spoil it for him. You'll have to wait till he gets here with the log." She smiled graciously. "Tell me all about Panama City."

Their orders came. McGee's thick, smoking steak was duly set out at the third place, but still he didn't come. Karen looked hopefully at the door, presenting a breath-taking profile as she murmured:

"I can't imagine what—"

Then the flash of suspicion brought Anders to his feet. Heedless of his crashing chair and the startled waiter, he stared accusingly into the girl's brightly innocent face. Her blue-eyed won-

derment turned suspicion into certainty. Choking, he found no words.

"Bright boy, Paul!" Her red head nodded approvingly. "Knew you'd catch on."

He gripped the edges of the little table, trembling with wrath. The girl merely smiled gayly up at him. Slowly he became aware of the uneasy waiter and the staring diners across the long room. His brown face flushed.

Still he found nothing to say, for the most of his anger was directed at his own stupidity. The trap had been so simple and transparent, and he had fallen so completely. Savagely, he thought he should have arrested McGee on the field.

"Be a sport, Paul!" Karen was laughing at him. "Sit down and eat your lunch. Cap'n Rob must be fifty thousand kilometers at space by now, and there's nothing much that you can do about it."

Grinning, he let the relieved waiter set up his chair.

"That wasn't very nice, Kay."

"Wasn't it?" Baby-blue, her eyes were very innocent. "Perhaps it's just because I used to work for Interplanet. All I know is what they taught me." She smiled, too sweetly. "But the *Jane* was legally cleared. We haven't committed any crime. And your plate's getting cold."

He resisted the impulse to slap her.

"But it's true, Kay?" He leaned urgently across the table. "You've really found artifacts from before the Cataclysm, and McGee has started after them? What are they? Writing? Carvings? Tools? Machines?"

She tossed her bright hair.

"Don't ask silly questions, Paul." Her eyes turned grave. "Drake, McGee & Drake are doing no contraterrene research for Interplanet. If you want to find out what we know, you'll just have to join the firm."

"Sorry, I can't do that."

"Then eat your lunch." That infuriating sweetness left her smile. "Try to forgive me, and let's talk about Panama City."

Anders grinned and attacked his plate. He answered her questions about the theater season in Panama City—the critics had said that all the plays were bad, but he enjoyed them. And Karen wasn't hard to forgive. He even paid cheerfully for the neglected steak that she had ordered for Rob McGee.

III.

Anders escorted Karen back to her platinum door. She had won a total victory, for Drake, McGee & Drake. For he knew that the *Good-by Jane*, with her powerful new engine, was now far beyond pursuit. The riddle of the seetee artifacts would have to wait for answer.

Yet the tall Earthman, returning to the spaceport with long, impatient strides, found the mystery growing in his mind. The theories of the Cataclysm had always seemed remote and improbable abstractions. But today's events had made that cosmic disaster immediate and real.

Two planets colliding! He made a dazed effort to picture the scene. The destroyed fifth planet had been an older world than Mars; only slightly larger, the German theorists believed. Perhaps it had carried ancient life—or the monuments and

bones of life fulfilled and dead before men came on the younger Earth. Not even the German professors knew that.

The Invader had been slightly smaller. It was all of contraterrene matter—stuff of nuclear negatrons and orbital positrons, electrically opposite to the matter of Earth and the doomed fifth planet. Some unguessed freak of the cosmos must have flung it from its native seetee system, and not even the Germans knew what untold ages it had wandered the interstellar void.

It had carried seetee life. The von Falkenberg film was evidence of that. Anders was haunted with a disturbing memory of that too-narrow ramp, winding up inside the hollow golden needle, with its queerly too-high railing.

What had been the builders of that enigmatic contraterrene monument? He tried to picture the things that must have walked that footway and failed. He couldn't even quite believe in contraterrene life.

Yet seetee, he knew, formed exactly the same series of elements and compounds as terrene matter, identical except for electrical sign. If the chemistry and the physics of it were identical, why not the biology?

A contraterrene man, he reflected, would never be aware of his plight. Not unless he happened to come into contact with normal matter. Anders wondered for a moment if any inhabitants of the Invader had indeed survived the crash. That would be a grisly predicament—to be lost amid planets whose soil and water and very air meant flaming annihilation.

"Nonsense!"

Anders was a practical man. His strenuous profession had left him little time or inclination for such fantastic speculations. Such wild hypotheses were better left for the German academicians. He reached the spaceport and took a Guard tender for the base on Pallas II.

On that tiny fortress moon—one of the six terraformed rocks that had been towed into a wheeling ring of forts and stations about the minor planet—he found the *Challenge* waiting for his command.

The ship was a long new paragravity cruiser, black-camouflaged, mounting two heavy spatial rifles in each of her counterbalanced turrets. She was twelve thousand tons of racing, fighting metal, a match for anything in space.

He was less well pleased with the crew.

Commander Mikhail Ivanovich Protopopov was a huge, shambling, bearlike Callistonian, of Ukrainian ancestry. His broad, puttylike face seemed to Anders both sly and stupid. He had a peculiar, blubbery, moronic-sounding laugh. His voice was a hoarse, grating whisper—the result, he said, of years in the care of the Soviet secret police. For he admitted that he had been a member of the unfortunate Neo-Leonist Party, himself fortunate enough to survive the fatally disappointing reception of the Europa Manifesto. Escaping to the Mandate, he had found refuge in the Guard.

Lieutenant Commander Luigi Muratori was a dark little Martian-Italian, with shifty, black, embittered eyes. He walked with a silent limp. He said that he had come to high space in consequence of the bloody suppression of the anti-Aryanist movement. His limp and his scars dated from the pogroms that celebrated the Treaty of Space.

Warrant Officer Suzuki Omura was a toothy, spectacled, efficient little Venusian-Japanese, smiling and over-polite. In a hissing, conspiratorial whisper, he pledged the support of his ambitious but unfortunate race.

"So nice, Captain Anders! So very pleasant, that honorable Interplanet Corporation and my poor brave people join together now. We are very poor and humble, captain. Our only wish is to lead the stupid majority of Chinese and Indonesian Venusians into the greater prosperity of the new order our leaders have planned. Now that we have the support of your honorable rich Interplanet, our plans cannot fail. Everything is going to be so very, very pleasant."

But Anders wasn't sure of that.

The spacemen were as polyglot as their officers. For a clause in the Treaty of Space, hopefully but not very successfully intended to promote the unity of the Guard, provided that the officers and men should be selected in the proper ratio from all the major planets.

Commissioner Hood's inside organization, composed of the ranking Earthman of the Guard, had found forty men all willing, for reasons of birth or politics or their own, to pledge their loyalty for Interplanet dollars. But Anders, after he had met the hostile and inquisitive suspicion of the high officers from the other major planets, couldn't escape a haunting apprehension.

His orders were secret. He determined to trust his officers and men no further than necessary. When they were alone in the gray-padded cone of the forward bridge, up in the cruiser's tapered nose, he told Protopopov:

"Officially, commander, our purpose is to rechart a few of the more dangerous swarms of seetee drift. You can tell the men that we are also testing a secret new device for the long-range identification of seetee."

The Jovian exile nodded, with a cunning glint in his small, slate-colored eyes. He had already been given to understand, by Hood's "insiders," that the actual mission of the *Challenge* was to track down a fifth column of spies and asterite malcontents suspected of preparing secret bases for a blitz against the Mandate by the Martian

Reich. In that hoarse, voiceless whisper, he agreed sagely:

"Misdirection is a wise precaution, sir."

"Our first landing," Anders stated, "will be on Obania."

For he wanted to find out if McGee had actually gone there with the *Good-by Jane*. He hoped, besides, to learn something about the asterite laboratory on nearby Freedonia. For Obania was the home of two more of the suspects on his list—old Jim Drake, and Ann O'Banion.

"Aye, sir." Protopopov's dark, waxlike, stupid-seeming face brightened suddenly with an invention of his own. "The Martian officers at the Obania base must be deceived," he whispered. "Shall we inform them that we are hunting down a gang of refiners, engaged in bootlegging untaxed fuel-uranium?"

"Ex'lent, commander." Anders grinned.

A shakedown voyage of less than two days brought the *Challenge* to Obania. The red flash of a photophone challenged them, from the control tower at the tiny base, and gave permission to land. A tall, black, torpedo shape, the cruiser dropped endwise to the polar plateau of the two-kilometer planet.

While Commander Protopopov, with his fable of the illicit refiners, went to pay an official call on the Martian-German subaltern, Anders set out in search of information.

Tall and trim in military black, the Earthman stepped briskly down from the cruiser's stern valve. Above the tiny, convex field, the sky was depthless midnight. The low, small Sun made a blinding dazzle against the gravel walks, the six-sided tower under the quartered Mandate flag, and everything within the near horizon.

Anders drew his black shoulders straight, with a conqueror's pride. Luxuriously, he inhaled the cool, thin, synthetic air. Clean and bracing in his lungs, it had a winelike tang of ozone. With a quick and energetic stride, he started toward the commercial docks.

For Obania made him feel a conqueror. Once an atom of dead rock, it was now an island of life. The spatial engineers, with slip sticks for swords, had captured these new outposts for men from the cold eternal enemy night. Paul Anders, like his father, belonged to that mighty race.

When he came into the commercial area, however, the pride of the conqueror fell. For here, beyond the new paint and the brisk efficiency of the military base, the deserted mercantile docks were sagging with neglect. A row of abandoned ore barges, streaked with red rust, jarred his sense of victory.

He paused a moment, frowning. Here the bright triumph of the spatial engineers had ended ingloriously in stagnation and decay. Somehow, he felt, mankind had been cheated out of all the splendid heritage the engineers had won.

What was wrong?

Impatiently, he shook that vexing question off. For, he told himself, he wasn't a social philosopher. He was just a working engineer, and now he had a job to do. An important job, to help restore the waning, threatened power of Interplanet.

Two shabby old men were laboriously pitching dollars at two small holes in the gravel by a rusty dock, where once the ships had landed. Hastily, they pocketed their coins as Anders approached.

"Do you know a girl named Ann O'Banion?" Seeing their hostile glances at his black uniform, he added, truthfully: "Captain McGee had a shipment for her."

"Reckon you'll find her at O'Banion's old house," one of them drawled reluctantly. "Down at the other pole. No, there's her little car, agin' the rail. She must be down at the *Stellar Queen*."

His head jerked vaguely, and Anders went on. He paused to glance at the little electric car. It was a curious, battered machine, looking as if it had been assembled out of junk parts, newly repainted in the vivid color known as seetee blue. Somehow, it made him wonder about Ann O'Banion.

A native of this tiny ghost planet, what would she be? The Earthman couldn't quite imagine any such cramping imprisonment, because his own horizons had extended from hot Venus to the gray, eternal chill of Callisto. He felt a dim sense of pity.

Beyond the row of rusting barges he found the *Stellar Queen*. Royal in name only, it was even smaller and more ancient than Rob McGee's little space tug. Bright meteor blisters, deeply pocked into its rusty hull, showed that it had recently met a fire storm.

On the dilapidated dock beside its open valve was a pile of crates and boxes and fuel drums, all stenciled in green fluorescent paint, *Drake, McGee & Drake, Freedonia*. Beside the pile stood a huge, red-bearded man, shouting at a boyish-looking girl in blue slacks.

"T'ousand dollar!" The red giant, evidently the skipper of the *Stellar Queen*, shrugged vehemently. "Million dollar! Keep it. I don't like fire storm. I tank I'm going back to Ceres."

"But you *promised*, Captain Erickson." Protesting, the girl sounded desperate. "And I just must get these supplies to Freedonia. The Drakes will be starving. They'll freeze without any fuel. Their air units will stop. You must—"

"Charter one trip." Captain Erickson shook his blond head, doggedly. "One was enough. I don't *like* seetee."

"I can get you through again," the girl insisted urgently. Her dark head moved, and Anders saw

the silver glint of a space pilot's badge on her cap. "I know every pebble of that drift. And we just can't leave them marooned there. You did promise Rob McGee, to keep Freedonia supplied—"

"Where is McGee?" Erickson dourly inquired. That was what Anders wanted to know, but the red-bearded spaceman gave the girl no time to answer. "Let him run that drift if he wants to be a fool. But I ain't ready to go to hell."

"Wait, captain!" The girl seemed almost frantic. "Please—"

But the skipper didn't wait. He turned and ponderously mounted the accommodation steps of the humble *Stellar Queen*. The girl ran after him, but the rusty outer valve shut in her face with an emphatic clang.

Turning slowly away, she came face to face with Anders. Tears of anger and distress were bright in her gray eyes. A wisp of dark hair trailed out from under her red space cap. Her face and her round bare arms were brown and freckled with rayburn. Tall in the slacks and sweater, she no longer looked boyish at all.

Maybe she wasn't exactly beautiful. Certainly she was far different from the sleek creations of the beauty salons in Panama City, and even Pallasport. But she looked abundantly healthy and thoroughly angry and not at all as if she wanted pity for being a native of Obania.

"Pardon, Miss O'Banion?"

Anders felt a sudden awkwardness as he introduced himself. He didn't quite know why, for he had mastered the social codes of four planets. But suddenly he knew he would very much regret it if he had to take this tall, space-tanned girl to the prison on Pallas IV.

IV.

She looked startled.

"B'lieve you're connected with the engineering firm of Drake, McGee & Drake," he told her easily. "I'm looking for McGee. D' you happen to know where I'll find him?"

The anger in her wet gray eyes changed to watchful hostility.

"Oh! So you're the Interplanet engineer?" Her cool tone indicated that Interplanetary engineers were quite unnecessary. "Cap'n McGee went to Pallasport," she told him gravely. "To have a new engine installed in the *Jane*."

"He had it installed." Anders watched her brown, uneasy face. "He left Pallasport five days ago. His papers were cleared for Obania."

"He hasn't come back." He thought she didn't seem much concerned over the fact that McGee was now some three or four days overdue. "If you don't believe me, ask your friends at the base. Now, captain, my father's waiting for me."

She turned away toward the battered little car.

"Wait, Miss O'Banion." She looked back inquiringly. She failed to hide the dark trouble on her face, or the bright tears in her eyes again. "I . . . I overheard your talk with Captain Erickson," he said awkwardly. "You were trying to charter his ship?"

She came back to him, hesitantly. He grinned at the wet streaks on her face, and suddenly she smiled in return. Her teeth were fine and even. Her gray eyes, for all the tears, were clear and warm and honest.

"I may as well tell you," she said slowly. "Probably you know we have a little open-space metallurgy laboratory out on Freedonia? Well, the Drakes are working there, and they need supplies and fuel. Erickson had agreed to supply them while Cap'n Rob is gone. But we ran into a pinch of seetee dust, and now he won't go back." Her smile had faded, and she disapprovingly eyed the star of the Guard on his collar. "But there's no use in telling you."

"I don't know." Anders grinned again, hopefully. "You see, my expedition is making a new survey of the dangerous drift. Evidently, that is going to take us to Freedonia. And we're supposed to aid civilians in distress, y' know. S'pose we take your supplies to Freedonia?"

"Oh, thank you!" For an instant Ann O'Banion was beautiful with gladness. Then her face turned grave again and she spoke with sharp mistrust. "But why do you want to do that?"

"Maybe 'cause I like the freckles on your nose."

She drew back a little and then decided not to be offended. Her ray-tanned face was very serious. "You really will do it?" she asked doubtfully. "This isn't just another Interplanet trick? Promise?"

"We're going to Freedonia," he told her. "Take this stuff, if you like. No difference to me."

"Then I'll go," she said suddenly.

"You?" He grinned at her. "We were talking about freight."

"Please!" He thought her voice was oddly urgent. "I simply must."

He nodded. "Pleasure."

"Thank you, captain!" Her wet eyes smiled again. "When are you leaving?"

"Tonight," he told her. "I'll have your cargo loaded."

"Maybe I was wrong, captain." Candidly, her gray eyes searched his face. "Maybe I was prejudiced, just because you work for Interplanet. Maybe you're not so—" She flushed and bit her lip and looked confused. But he grinned cheerfully and she smiled. "Please, captain," she said impulsively, "won't you come to dinner?"

"Pleasure," Anders said instantly.

He returned to the *Challenge* and left orders with Muratori to load her shipment of supplies.

She waited for him with the little car, and he jackknifed himself into the narrow seat beside her.

Ann O'Banion's tanned hands were skillful at the wheel. She drove him south, over the toppling near horizon. Watching the grace of her bare arms, and her pleasing face with its hints of strength and honesty and humor, and the rebel wisp of dark hair, he wondered more than ever what she really was.

"Obania comes from O'Banion?" he inquired.

Her red cap nodded toward the rusting derrick above an empty, abandoned pit. Hanging from it was a fading sign:

Uranium Prince No. 1
O'Banion Mining Co.

"Dad was the pioneer here, back before the war," she told him. "Mr. Drake came with him to install the terraformer and the mining equipment and a little refinery. He made a little money till the war. But the Mandate closed the refinery."

Her voice seemed to hold no bitterness. She was merely stating sober fact. "Rick Drake and I were both born here. He went away to school on Earth. I didn't have money enough. There is still ore in the rock, but dad would never sell out to Interplanet—and they taxed him out of business."

She looked aside at his interested face.

"I don't know why I'm telling you all of this."

"Because I really want to know," Anders told her.

The road dipped under black iron bluffs, and they drove through the town. It was a single street of flimsy metal buildings, half of them abandoned now. On one tall, rusty false front he read another faded sign:

Drake & McGee, Spatial Engineers

"Quite a contrast."

He was thinking of Karen's swanky new office. But that thought brought his eyes back to the tanned frontier girl at the wheel. He couldn't help contrasting her unspoiled simplicity with Karen's sophisticated loveliness. Something made him smile.

"Am I amusing, captain?"

"Sorry," he said. "Just wondering what you were."

"And now you know?"

"I think I'd like to know."

She drove faster. As the silent little car plunged down over the tiny planet's curve, he had to resist an impulse to clutch at the seat. They skidded to a breath-taking stop.

Old O'Banion's metal mansion was boldly perched on a dark, lofty crag. Big and angular, it was embellished with the chromium gingerbread in style forty years ago, stained and tarnished now.

Ann was out before he could extricate himself from the tiny car. He followed her up between the imposing chromium columns. She seemed out of breath, but she gave him a quick little smile before they went in.

She introduced her father. Bruce O'Banion was a big, shaggy man, with tarnished war medals on his faded uniform—he had led a little asterite fleet against Interplanet. His lips had a bitter sag and the veins on his nose and temples were red from too much drinking.

Anders had hoped for some chance reference to the laboratory on Freedonia or the mysterious voyage of Rob McGee or even to the outlawed Free Space Party. But Ann fixed the stooped old man with warning eyes.

"Captain Anders, dad." Her faintly malicious smile made Anders wonder if he hadn't been mistaken about any unspoiled simplicity. "He's the Interplanet engineer who followed Rick and Cap'n Rob out to that runaway rock, and tried to take their diamonds, remember?"

"Eh?" muttered the tall Earthman uncomfortably. "Anyhow, I didn't get them."

As charmingly demure as Karen Hood had ever been, she led them into the long front room, old-fashioned and threadbare and very clean. Anders made a confused effort to revise his idea of sophistication. Perhaps it was something that could be acquired as readily on a frontier rock as in the salons of Panama City.

"Yes, Mr. O'Banion, I know Rick Drake," he attempted hopefully when she had left them alone. "He and his father must be doing some very interesting work. Have you seen that new lab of theirs on Freedonia?"

But old Bruce O'Banion made a derisive snort and began to talk about the greater days before the war. Never a hint of a contraterrene lab, or artifacts from the Invader. Anders rose with relief when Ann called them to dinner.

Evidently she had cooked it herself, and it was good. The roast dehydrated beef and mashed dehydrated potatoes didn't taste dehydrated. Anders accepted a second portion of dried-apricot cobbler, and observed that Ann looked charming in a blue apron.

The *Challenge* was standing beside the rusty dock when they drove back to the spaceport. The supplies had been loaded. Ann parked her little car and they took off for Freedonia.

He let her come with him to the gray-walled bridge. She watched the instruments with a lively interest as he set up their course on the pilot-robot, and commented that she had learned

her astragation from Rob McGee. He offered to find her a cabin.

"Thanks, but I'll stay up," she told him. "It's only five hours, with the acceleration you're using, and I'm not sleepy. Besides, you'll need me for a pilot, coming in. There's really a good deal of the drift."

Suzuki, executive officer of the watch, kept politely to the after control room, and Anders enjoyed the flight. While the pilot-robot held the course, he encouraged Ann to talk. It was mostly of her childhood on Obania. She had attended a one-room school that her mother taught for the miner's children. Her father had a little library, and old Jim Drake taught her mathematics. Rick Drake had been a playmate until he went back to Earth. Of course it seemed lonely when she grew up, with the mines shut down and everybody leaving.

"But things are going to be different now!"

Her gray eyes were shining, and her voice was light and happy. Anders felt elated, too. He had talked more than usual of his own early life, when his time was divided between his mother's expensive apartment in Panama City and long trips to space with his engineer father.

Presently he had a supper set for them down in the wardroom. He ordered a bottle of wine, but Ann wouldn't let him open it.

"I feel gay enough, just from talking to you." She smiled, and her tanned face had a glow of excitement. "Besides, it's really dangerous, coming in to Freedonia. Remember Captain Erickson. You'll have to let me pilot you in."

They returned to the bridge.

The *Challenge* had none of the broad ports of a liner's promenade. Enemy fire or the meteor drift might smash them too easily. Anders went to the hooded main periscope, whose narrow tubes penetrated the steel and lead and gray plastifoam lining of the tapered hull.

He spun the vernier wheels and found Freedonia. At first it was a dull, tiny mote, lost in the field of frosty black. He increased the magnification until it became a mighty cube of black, cragged iron, rolling like a giant's die on black, diamond-dusted velvet.

He was looking for the Drakes' laboratory when he saw the gleam of danger. A tiny star, above the cube of iron, flashed yellow, and red, and green. Another winked out below. Two more.

"Eh!" His startled voice went back to Ann. "Blinkers all around it. Three—and there's another! Must be right in the middle of a seetee swarm!"

"It is," Ann said calmly. "You'll see another blinker—there are five, in all."

"Five!" He swung away from the instrument, straight and spare in the black of the Guard. Their warm sense of comradeship was shattered now and his eyes had a glint of steel. "How does that happen?"

"Freedonia passed through a drift area," she said simply. "The relative velocities were small and our peegee unit picked up seetee satellites. You know, the eccentricity of the orbits—"

"Five's too many!" Anders thrust an accusing finger at her. "And the orbits are too close. The Drakes have somehow towed that drift into orbital positions around Freedonia. Haven't they?"

She stepped back, with frightened protest on her face.

"Why, Captain Anders?" She managed a weak, unconvincing laugh. "Why do you think we'd do that?"

"Two reasons." His voice was hard and brittle. "One is to discourage intruders—no wonder Erickson wouldn't go back! The other is to give old Drake and his son a convenient reservoir of material for their seetee experiments!"

She tried to answer, but she couldn't. All the color drained out of her face. She stood gazing at him with black, dilated eyes. She looked terrified. Anders had an uncomfortable picture of her, standing so, at the bars of a cell in the nickel-iron heart of Pallas IV. It made him feel a little ill.

"Please—" he gulped uncertainly. "Ann . . . Miss O'Banion—"

But she didn't speak or move. Without quite meaning to, he reached out to pat her stiff shoulder. She struck savagely at his hand, and then turned quickly away from him. Still she didn't make any sound, but he could see that she was sobbing.

V.

Anders offered his handkerchief. Ann O'Banion took it with an angry little snatch. She stopped her silent sobbing and dried her eyes and looked at him again, now with a solemn little smile.

"Sorry." She gulped. "I've been a fool. I thought I could guide you in and out without letting you guess. But now you'll have to take me back to Obania."

Anders liked her smile. Her tanned face had no make-up for the tears to ruin, and he saw with approval that her eyes weren't red. But they had a cold fighting glint. She was still a determined antagonist.

"'Fraid not." He suppressed a brief regret that he hadn't been free to join the firm of Drake, McGee & Drake. "We're still going to Freedonia. Don't blame yourself. I was headed there before I met you."

"You can't get through without a pilot." Her voice was low and taut. "Those blinkers aren't enough. You'll be wrecked in the drift."

"P'raps," he told her cheerfully. "But the Guard will send a squadron out to look for us."

Facing him in that silent conical room, whose gray padded walls muffled everything except the muted clicking of the pilot-robot, she stood uncertain and afraid. Her pale tongue wet her full, paintless lips. She gulped and didn't speak.

"Don't you worry." He grinned at her unease. "We'll get through. Besides the armor, we've got the peegee safety field. With that minus field up, you couldn't hit us with a spatial gun."

"But you can't get through." She was breathlessly intense. Her brown face made a small, wistful smile. "Please, let's go back."

But she saw her appeal was futile, for white teeth bit into her quivering lip. Her fine shoulders, in the trim blue sweater, made an eloquent little shrug of defeat. The pain in her eyes made Anders look away.

"You win, captain." Her voice was small and flat. "No use to let you kill yourself, because there would only be another. Give me the wheel, and I'll take you safe down to Freedonia."

"I don't need a pilot—"

Her face stopped him with a quizzical, bitter little smile. She went slowly to the control wheels. With a confident skill she took the ship off the pilot-robot and turned to the main periscope.

"You see, captain," her muffled voice came through the black hood, "you aren't the only one out looking for the easy way to master seetee. Among the others there's a Martian-German spy named Franz von Falkenberg. Once he held up Mr. Drake and Rob McGee at the office on Obania, and got away with some important plans. Of course we can't report things like that. We have to try to protect ourselves."

Her level gray eyes glanced back from the hood.

"So you see, captain," she went on very quietly, "there happens to be more in the way than just the drift. We laid a field of automatic mines—where those seetee blinkers would keep any honest ship from running into them. They're equipped with peegee units that Rick designed. Your safety field would only draw them against the ship."

"Eh!" Anders swallowed hard and whispered, "Thanks!"

"Don't thank me!" Ann O'Banion told him savagely. "I wish I'd never seen you!"

But she brought the cruiser down a twisting curve through the spinning drift and the flashing beacons and the invisible black mines, to land it safely in a shallow iron depression at the south pole of Freedonia.

"We've installed a peegee unit," her strained low voice came through the hood. "It's to anchor our equipment and hold the satellites. There's no atmosphere. So don't go out without your armor."

"Naturally." Anders grinned. "If you're operating seetee machinery, you have to do it in contraterrene air, or none at all. But thanks for your solicitude."

The answer was an angry little sniff.

At the auxiliary periscope he had watched their approach to that small black world of cragged iron. Now he saw that she had set the ship down beside a small dock platform. Beyond it stood a long sheet-metal building, so skillfully splotched with black and gray camouflage that he caught his breath to find it.

"The lab?" he asked, but she didn't answer.

Across the hollow, hidden deep in the shadow of the walling cliffs, he discovered a tiny cluster of dome-shaped fabric tents, also splashed with concealing paint. That rude little camp seemed deserted, and he inquired:

"How many men have you here?"

"Just Rick and his father," she told him. "Of course we had to have a crew to set up the buildings and the terrene machines, but that's all finished. Here they are!"

Two bulky suits of silver-painted dirigible armor had soared like miniature spaceships beyond the long building. Keeping in the shadow of the rock, they were hardly visible, until a photophone flashed red. Turning to the communications board, Anders brought in Rick Drake's voice:

"Cruiser ahoy!"

"H'lo, Drake." Anders felt a surge of irrational hostility, the reverse of gratitude. "Remember Captain Anders—the officer you rescued from that runaway?"

"Oh—Anders." Rick sounded equally hostile and also dismayed. "What do you want?"

"Come on aboard and find out." Anders tried to assume Hood's invincible heartiness. "Your father, too. I'll have the lock opened at once. We've brought you a little surprise—you can't guess who!"

"Beast!" hissed Ann O'Banion.

But the two flying suits dropped toward the little dock. Anders took up the ship's telephone and found Muratori now on duty in the after control room. He ordered the lock made ready for the Drakes, and added:

"Send them up in the elevator. I'll receive them here on the bridge. And have the shipment of supplies unloaded on the dock."

"Aye, sir," rapped the little Martian's metal voice.

Ann stood bitterly silent.

The two Drakes came up the cruiser's tiny elevator and mounted the short companion through the bridge deck. Two weary, awkward giants, they climbed heavily into that small gray room and stood staring bleakly at him and Ann O'Banion.

The elder and the younger, they looked queerly alike. Old Jim Drake—Seetee Drake, as Anders knew men called him—was shrunken and stooped. He eased his left knee, painfully. His thinning hair was roan.

But Rick Drake looked equally gaunt and drawn, from sheer fatigue. His hair was stiff and bronze. But they had the same blue resolution in their tired, hollow eyes, and the same red neglected stubble on their chins. They both looked warily at him and questioningly at the tense-faced girl.

"I'm sorry," she whispered faintly. "We . . . I guess we just played a game, and Captain Anders won."

Rick Drake turned his cold, accusing eyes at Anders. But the old man's faded eyes turned warm with sympathy. He limped to the girl and put his mighty arm around her as if she had been a troubled child.

"Don't mind, Ann," his deep voice rumbled softly. "I know you couldn't help it."

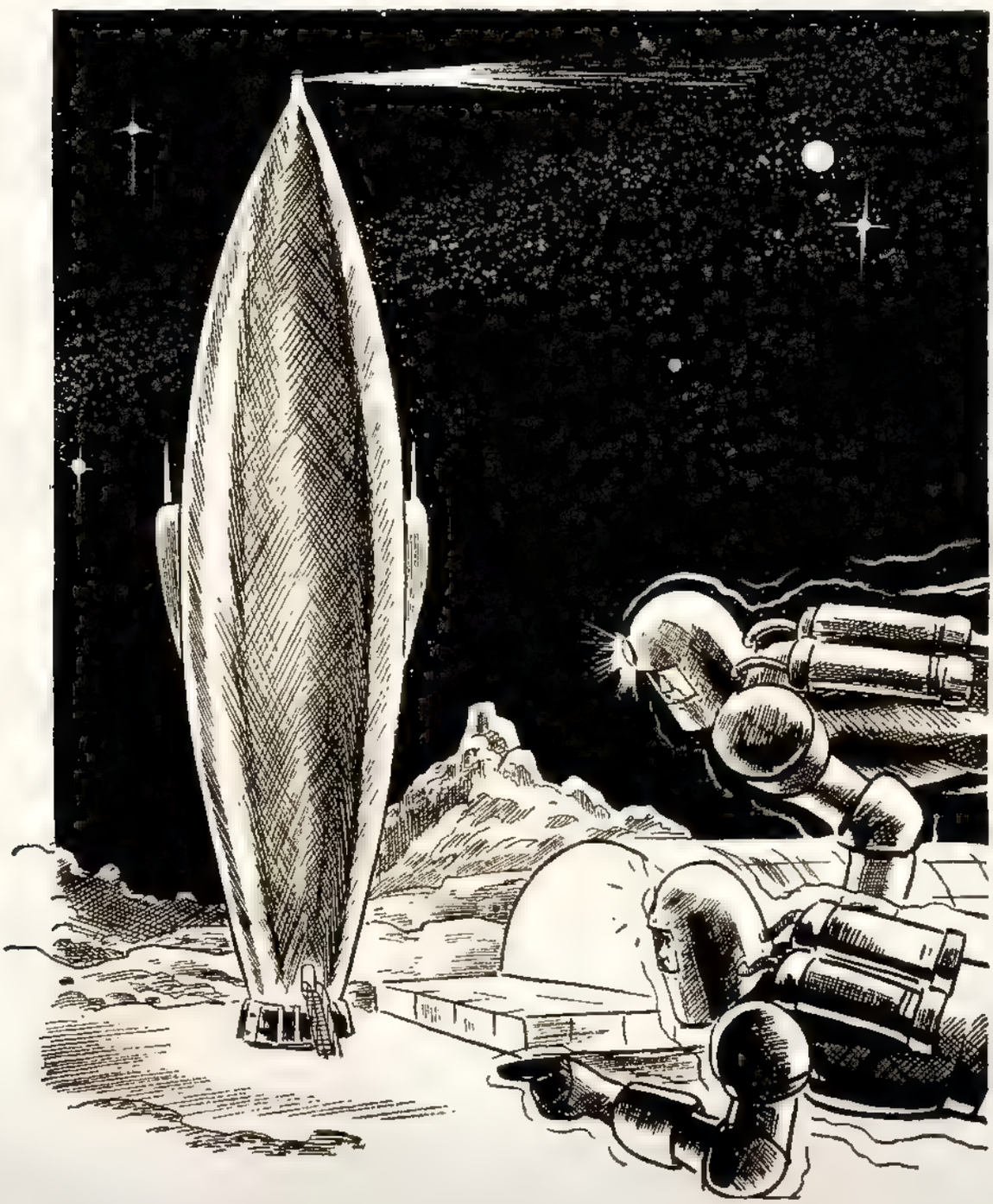
"That's so," Anders told him. "I was coming, anyhow, and there was nothing she could do. Of course your mine field might have got the *Challenge*, but that wouldn't have done you any good for long."

Out of a tense little pause, Rick asked flatly: "Now what do you want?"

"Y' see, we've evidence that you are engaged in seetee research." Anders found his voice clipped and brittle, as if this scene were somehow painful. "First thing, I'll want a look at all your shops and equipment."

Rick's hard voice said, "We're breaking no laws."

"P'raps not." Anders grinned back at his defiant stare. "But y' know the laws of today aren't going to matter very much in the battle for seetee.



'Cause whoever wins will be writing the laws for tomorrow."

"You mean, if Interplanet wins!" Rick was pale beneath the spaceburn, and his low voice had a snap of savage restraint. "You want to push the planets back into slavery, under your damned empire, for another hundred years. Well, you'll get no help from us!"

"Aren't you rather bitter, against a former employer?" Anders looked hopefully at old Drake and the girl, but their set faces were equally hostile. "After all, it was the Interplanet engineers who developed paragravity, and really conquered space. Aren't we entitled to share the spoil?"

"Your point of view," sneered Rick Drake. "It's true I used to be an engineer for Interplanet, at ten thousand a year. But I know plenty of stockholders who don't know a slip-stick from a sleeve valve, and never risked their precious fat hides ten kilometers over Panama City—drawing millions."

"So do I." Anders shrugged his straight black shoulders. "I know Interplanet isn't perfect. But I'm just an engineer with a job to do. That job is to find out how to work seetee."

Ann O'Banion's gray eyes were cool with scorn. "Why not build a lab of your own," she inquired, "and figure it out for yourself?"

Anders gave her a slow brown grin and watched her tanned hands ball into angry little fists. He saw smoldering anger, too, in the patient, hollow eyes of old Jim Drake.

"This isn't just a parlor game," he said. "The other planets are trying, remember. Seems the Martians have found a seetee artifact—a thing made by the inhabitants of the Invader. S'pose they get the clues they need to handle seetee? Y' think the Martian Reich would be a better big neighbor than Interplanet?"

Ann didn't answer, but he saw quick dread spring into her eyes. Old Drake's great gaunt shoulders sagged a little more, as if they had received another weary burden. Rick, with consternation on his lean, ray-burned face, demanded sharply:

"What artifact? Where is it?"

"That's the situation." Ignoring Rick, Anders tried to be persuasive. "Y' understand why I've got to get seetee. But I do have a good deal of discretionary authority. I can promise you a square deal, for Drake, McGee & Drake."

"You expect us to sell out?" Ann's face was taut with scorn. "To Interplanet?"

"Why not?" Anders said urgently. "We can't let you go ahead with this. That mine field alone is evidence enough of your treasonable intentions. But I'll make a deal in spite of that, if you've anything to sell. I'll even promise one of you a directorship in Interplanet if you can work seetee."

Ann echoed coldly, "Promise!"

"Anyhow," rapped Rick Drake, "we can't."

"Better sell," Anders soberly advised. "Or I'll have to take it."

Ann's face was white and set beneath her tan. She had caught her breath, as if for some angry retort. But old Jim Drake took her arm and drew her back with an awkward, weary gentleness.

"No use, Ann." He shook his roan, shaggy head at Rick's look of anxious protest. "No use," he repeated heavily. "Seems Captain Anders has drawn all the aces."

Unwillingly, the angry younger giant subsided.

"We've nothing to sell." The deep, rusty voice of the elder was tired and low, edged with bitterness. "Interplanet has nothing to worry about from us. But I guess the best way of proving that, captain, is to show you through the shop."

"Thanks, Drake." Anders felt relieved. "To show that I mean to play fair I'll come alone. The crew will have orders not to leave the ship for—say four hours, if that's time enough?"

"Two hours will be enough," the old engineer said wearily, "to show you that we've failed."

VI.

Anders called Commander Protopopov on the ship's telephone. The big, hairy exile climbed up the companionway with the heavy, clumsy shamble of a Callistonian bear. His flat, cunning eyes blinked at Ann, and she drew back with a hot flush.

"Take over, commander," Anders told him curtly. "I'm going off the ship."

Protopopov was leering at the two Drakes, with his small, opaque, stupid-seeming eyes. He appeared to believe that they were Martian-German agents, and Freedonia a secret invasion base, for his hollow whisper came anxiously:

"But, captain, will your life be safe—"

"If I'm not back in four hours," Anders told him, "you can send out an armed search party. But keep every man aboard till then. That's an order."

"Aye, sir." His puttylike face held a moronic stare, and he made an awkward, shambling salute.

Two by two, the tiny elevator dropped them to the valve deck. The Drakes climbed back into their outsize space armor. Ann had shipped a suit with her cargo. Anders put on his own. The air lock let them out upon the little dock.

Ann glanced at her pile of crates and drums already unloaded there, neatly covered with a silver-painted tarpaulin against the chill of space. Anders couldn't see her expression, beyond the face plate of her bucket-shaped helmet, but the

red flash of her photophone brought him one curt word:

"Thanks!"

Walking in these cumbersome suits of steel and lead and sealing plastic was laborious and slow. But small paragravity units, battery-driven, could lift them into easy flight. With his left hand Anders held the outside control stick, in front of the chest—although the suit was also equipped with a helmet stick, to be held with the teeth when both hands were occupied. He swam after old Jim Drake into the long dark building beyond the dock.

The interior surprised him.

The lofty walls, of corrugated metal, were painted white. Fluorescent tubes made a flood of light. Half the immense floor was spaced with big machines. The other half was vacant, merely dug with a long, double row of empty pits.

Down the center ran a white-railed catwalk with branches reaching toward each great machine. Old Drake dropped his armored bulk upon it and Anders came alertly down beside him. His helmet light carried a startled question:

"Seetee?"

But he didn't need the deep-voiced answer because in a moment he had seen the Interplanet trade-mark on the boiler of the huge uranium motor-generator that fed electric power to turret lathes and milling machines and a complete battery of automatic machine tools.

"No." The photocells in the crown of his helmet picked up Drake's tired, rusty voice. "These are all terrene. We got them just for models, and to build the other terrene tools we thought we'd need."

His bulky sleeve gestured heavily toward the empty pits.

"That was to be the seetee shop."

They moved along the railed footway. Anders could feel a faint vibration through his soles. He saw a big flywheel turning ponderously. Bright ribbons of magnesium curled endlessly from the tools of an automatic milling machine. But there was no sound.

The hard vacuum of space doesn't carry sound. Anders understood that well enough, yet this total silence gave him an eerie sensation. Something was strange, almost unreal, about the operation of a huge drop hammer that fell without a crash.

It seemed uncanny, too, to watch this whole intricate shop running so smoothly without attention. He paused to watch an automatic turret lathe that picked rough gray beryllium castings from an endless conveyor and swiftly turned them to an intricate and unfamiliar shape.

"What are you manufacturing?" he inquired.

"Only patterns," old Drake told him. "Terrene patterns, for the seetee machines we can't build. All this was just planned for a model, you understand, for the seetee shop. Every control is fully electrical or automatic, from the ore chutes and induction furnaces, all the way to the assembly jigs."

"I can understand the necessity of that," Anders agreed. "If a workman happened to touch a seetee machine he'd just burn his finger off. But you must have some kind of control?"

"Induction," old Drake said. "That requires no contact of conductors. We've designed push buttons and verniers, to act through induction relays. And there's the terrene half of our main transformer."

He pointed at a tall, unfinished bulk near the rows of empty pits. "Current inducted in the seetee half was intended to power the seetee shop from our terrene generator."

"Beautiful!" Anders glanced admiringly back at the twin rows of gleaming automatic machines under the tall white walls, all running soundlessly and unattended. "Beautiful shop."

But old Drake was looking ahead past the half-completed transformer and the empty hooks hanging beneath the massive beam of an overhead traveling crane, at the double row of vacant pits. Even the bulky armor couldn't hide his mood of bitter defeat.

"We tried," he said simply. "And failed."

"Failed?" Anders echoed, unbelievingly. "Seems to me you've thought of everything. You've spent millions of dollars and built all this." He tried again to see the old man's face. "How could you fail?"

Old Drake seemed to shrug in the bright armor.

"We've spent more than millions." His voice was dull and weary. "I've spent forty years for this. Sometimes I've thought success was near. I even used seetee power to swing Freedonia out of a collision orbit. But still we've failed and one word will tell you why." His heavy steel arm pointed toward the empty pits. "Bedplates."

"Bedplates?" repeated Anders, wondering.

"Machines have to be secured in place against thrust and vibration," the armored giant told him patiently. "Especially when they're seetee. Sometimes the clearances must be very fine—in such things as the transformer cores and induction relays that we can't quite build."

"Surely there's a way," Anders protested. "Seetee iron is still magnetic. I've seen a permalloy magnet, floating on the repulsion of the like poles of another. Just a toy, but the same principle—"

"Where," inquired Drake, "will you find any contraterrene permalloy?"

Anders moved quickly toward him.

"But you've tried something." He let his voice ring hard. "All this is very pretty, Mr. Drake. But now let's see your seetee machines!"

The old man didn't respond. Anders looked at

him searchingly and then glanced sharply back at Rick and Ann, who had followed along the narrow walk. The reflection on their blank face plates concealed all expression, but he could imagine a suspicious hostility.

"Take him on, dad." The sudden red flicker brought Rick's voice, harsh and low. "It doesn't matter now."

"Then come on, Captain Anders," the tired elder giant rumbled patiently. "It's only a hammer. We set it up at the other pole—just in case of accident."

Rick soared away, suddenly, toward the tall switchboard at the entrance. Then Anders noticed the warning hum in his phones and saw that it came from a red light glowing over one of the machines.

"We'll go on."

Old Drake lifted in his armor. Anders and Ann swam after him, over the empty pits, and out through another doorway in the rear of the long building. For a moment Anders could see only blackness. Then the hard diamond stars came out again, and the astragation lights on the cruiser's tall black shadow. He followed the old engineer, flying over the low iron cliffs with Ann beside him.

Halfway around the little world, in another cragged cup of night, was a rough little shed of dark-painted metal. They went inside. Old Drake turned on a light. Anders stared at the contraterrene hammer.

He had expected something small and crude. But this massive red-painted frame was three times his height. All the parts looked well designed and accurately machined. A guard rail surrounded the great anvil, glowing with red fluorescent paint. Small hanging signs warned:

SEETEE—DANGER!

The Earthman tried not to shiver. But it made him feel uneasy and almost ill to imagine the results if one happened to fall against the hammer. He conceived a sudden new regard for the abilities and the courage of Drake, McGee & Drake.

"It isn't all seetee." The old engineer moved calmly to the glowing rail, explaining patiently. "Only the hammer itself and the anvil. They are native contraterrene nickel-iron. We shaped them out at space, with a cutting jet of terrene nitrogen, and towed them into position with magnets."

Anders looked across the red-glowing rail. The anvil was a massive rectangular block, level with the floor. The hammer was a tall cylinder. He tried to imagine all the planning and the risk and the heartbreaking labor they stood for.

"The anvil weighs fifteen tons," old Drake's deep, rusty voice went calmly on. "It is floated between negative paragravity fields, repelling it from six directions. We draw power from the main plant."

He pointed to a thick-armored cable.

"The hammer slides in similar repulsion fields." His steel arm indicated the tall black cylinder of contraterrene iron. "It is lifted by a positive peegee unit, at the top of the frame. That unit is reversed to drop it."

His blank face plate turned slowly to the Earthman.

"Can you build a better hammer?"

Anders didn't think so, but he merely asked: "How do you hold the work?"

"We don't," Drake told him. "We tried to design seetee tongs with terrene handles. But they were even less successful than the hammer."

"What's wrong with the hammer?"

"Do you want to see it run?"

Anders heard a quietly ominous difference in old Drake's rumbling tone. He remembered that Rick had found an excuse to stay behind. A sharp suspicion made him hesitate—for he knew a pretended accident would be very easy here and a human life was worthless against the prize of tamed seetee.

"'Fraid?" Ann's low voice was mocking now. "Then I'll hold your hand."

He felt her glove in his.

Curtly, he called at old Drake, "Go ahead!"

Awkward in his armor, the old engineer moved behind a massive parapet of lead and iron to a simple switchboard. Anders wanted to move back but the girl stood bold and angry against the glowing rail.

The tall iron cylinder lifted. It came down with a silent smash on the massive anvil block. It lifted again and the girl was calmly pointing. Anders saw, with a dull terror, that the cylinder had begun to wabble, as if loosely held in its guides. The anvil rocked and tossed like a cork on uneasy water. The hammer came down again and the anvil tipped to meet it.

Anders knew what was going to happen. Desperately he seized the neck strap on Ann's armor and flung her backward toward the doorway. Behind them was a blinding flash.

The girl pulled herself free with an angry shrug. When he turned to look, old Drake had stopped the hammer. Metal was glowing where the tall cylinder had rocked against the terrene frame. Hammer and anvil quivered in the fields of repulsion that floated them and slowly came to rest.

"Sorry, Captain Anders," old Drake rumbled calmly from behind the parapet. "It usually will stand half a dozen strokes. But we can't damp

out the oscillation and vibration—not enough for a safe bedplate."

That savage explosion of gamma rays and neutrons had, evidently, been nothing unusual to old Drake and the girl. Perhaps the lead-lined armor made them safe enough. But Anders moved watchfully back from the guard rail. Even at rest the hammer was somehow awesome. Seetee machinists, he thought—if such a calling ever came to exist—should command high pay.

"Well, captain?" In a soft, scornful voice, Ann repeated old Drake's question. "Can you build a better hammer?"

Thinking of all the money and the painstaking skill that had gone into this machine, the years of patient planning and the months of daring labor—with danger and death waiting for one chance slip of a tool—Anders was staring in admiration at old Jim Drake.

He wondered if seetee would ever be conquered. He couldn't imagine any more thorough and skillful and audacious attack than this had been. Suddenly the job Commissioner Hood had given him appeared quite hopeless.

"No," he said. "I couldn't."

"So you see we've failed." The old engineer turned out the light over the machine and came slowly back toward the doorway. Even in the motion of his glowing helmet light, Anders could see his weary limp, and the crushing weight of years and failure. "That's all you want to know?"

"Not quite," Anders said. "There's one more item." He tried to peer through their blank face plates. "Where is Rob McGee? What's he after, with the *Jane?* Maybe a seetee artifact, from the Invader?"

Ann seemed to stiffen in her armor.

"You won't find out from us!"

VII.

"Now we're going back aboard the *Challenge,*" Anders told them in a crisp, official voice. "Please call Rick. Have him shut down his machines if he doesn't want to leave them running. Because we still have to reach some understanding."

As they soared back around the night side of that small iron world, three small ships flying through open space, he was trying to decide what to do with the Drakes and their laboratory.

The problem appeared both difficult and dangerous. Such competent engineers might yet invent a satisfactory seetee bedplate, at any time. Once they had a working seetee shop, he knew, Freedonia could be transformed into a citadel strong enough to hold off the whole armada of the Guard.

Ann O'Banion followed him, flying beside old Drake. Her helmet light was dead. Her armor was only a tiny silver atom, lost amid the dimensionless diamond points of far-off suns. But Anders was annoyed to discover how much her mere presence disturbed his logical processes.

He still felt shaken from that blinding explosion when the hammer touched its frame. Little fool, she might have been killed. Of course the armor was protection against any moderate intensity of gamma rays. But suppose old Drake hadn't stopped the oscillation? The blowup of the whole machine would have wiped them both off the rock.

That realization made him feel cold and ill and he wondered why. True, Ann O'Banion had surprised him. He had expected to find a slatternly brat, but she had the pride and poise of an Interplanet heiress.

She was only a stiff robot now, flying behind him in the bright armor, but for a moment he yielded to warm impressions of her. The young grace of her, lithe and vital, becoming to the slacks and blue sweater. Her brown, capable hands, skillful on the wheel of her little car. The perfume of her dark hair when he stood beside her as she expertly brought the *Challenge* down to Freedonia.

He thought he hadn't heard her really laugh. Even when she had smiled there was always a barrier of hostility between them. He tried to picture her gray eyes warm with comradeship—and then he caught himself.

He couldn't fall for an asterite girl. That was fantastic. Maybe she was attractive. But still she was as different from him, in birth and culture and experience, as a girl could easily be.

Opposites attract.

That ancient law came to mind and he dismissed it almost angrily. It might be true of magnetic poles and electrical fields, but he thought it couldn't apply to human beings. Not really. Human opposites merely clashed.

No, he informed himself sternly, any sympathy for Ann O'Banion was dangerous folly. He was an Interplanet engineer, and the path of his duty was plain. She must have her full measure of justice, but nothing more. If it came to that final hard decision she must go to prison with the rest.

They came down to the little dock beside the cruiser's tall shadow. Ann brought Rick Drake from the camouflaged building. They left their armor inside the valves and the little elevator lifted them back to the astragation deck. Anders climbed ahead into the bridge. Commander Protopopov met him with a leer of moronic cunning.

"You are too bold, captain." He lowered his hoarse whisper with a crafty glance at the companion. "I was afraid they might trap you. But I see you've turned the tables again." He touched the spatial automatic at his belt. "Shall we take them now?"

"Wait, commander!" Anders caught his huge, awkward arm. "You see, the whole situation has taken a very delicate turn. These people must be handled with the utmost care. I am going to have another talk with them, alone."

"Ah, so they have confederates!" The exile's broad putty face turned bright with that deduction. "And you wish to set a trap for the entire ring. Very clever, captain! If they try to make any trouble I'll be waiting down on the astragation deck."

With the shamble of a walking bear, Protopopov descended the companion. The three asterites came up. Rick and his father seemed more alike than ever: red-stubbled giants, stooped and weary, yet with blue determination burning in their eyes.

Anders looked at Ann O'Banion. She was pale and taut. The dark, unruly wisp of hair, curling across her brown forehead under the edge of her red space cap made her look more than ever like a frightened child. He tried to smile at her, but her gray eyes checked him with their level hostility.

"Well?" Rick said flatly. "What now?"

Anders looked away from the tall, defiant girl. He saw Rick's smoldering anger and the patient disapproval of old Jim Drake. He tried to meet that barrier of cold antagonism with a hard brown smile.

"That's up to you," he told them. "Obviously, we can't just leave you to go on with this. You might design a new bedplate, any day. That hammer might even work a good deal better if I wasn't looking on."

He looked back at Ann's set brown face and the smile left him.

"On the other hand," he said soberly, "I don't want to take you all to Pallas IV. Perhaps there's no clear evidence that you were planning treason. I still hope we can find a plan of co-operation."

He looked at old Jim Drake.

"Maybe I can leave a guard here," he suggested hopefully, "and let you carry on. If you design a satisfactory bedplate, Interplanet will buy you out. I can promise generous terms—you might very well let Karen Hood arrange them for you." He smiled a little, wryly. "Besides," he added, "you'll have to tell me what Rob McGee is up to."

Rick's stubbled jaw set a little harder at the sound of Karen's name, but none of them answered. The voice of Anders turned clipped and curt, hiding his discomfort.

"The alternative is prison."

Old Jim Drake looked suddenly older. His mighty shoulders sagged. His space-battered face turned bleak and hollow. His gaunt frame swayed a little, and Anders saw that he had to favor his bad left knee. His eyes were dark with long frustration.

Rick caught his breath with a tortured little sob. He rocked forward on his feet and his bronzed fists knotted. Gravely, Anders shook his head and touched the powerful little spatial automatic he wore at his hip.

"Better not," he advised.

"Bully!" The tall girl moved toward him suddenly. Her taut face was pale and he noticed that the freckles on her attractive nose were oddly distinct. "But you've forgotten something, captain." Her voice was cool and scornful. "You don't hold all the cards."

"Eh?" Anders liked the fighting courage in her gray, level eyes. He wished again, with a bleak sense of loss, that chance had not set them at such poles apart. "What have I forgotten?"

"The mine field." She smiled a little, triumphant and scornful. "You can't get through it without one of us for a pilot. And I don't think you'll want to call your base for a sweeper. Because that would tip your game to the Martians."

Her voice was a cool challenge:

"How about it, captain?"

"That's an ace, Miss O'Banion." He smiled again, as if in polite pleasure at her victory, and made her an ironic little bow. "But how are you going to play it?"

Rick Drake first looked relieved, and then stared at him suspiciously. Old Drake's patient ray-burned face didn't change. The tall girl stepped a little toward him with an urgent, half-pleading, oddly childlike expression.

"Just leave us alone. Please, that's all we want. I'll pilot you back through the mines if you will give me your word to go on and forget us. If you're afraid von Falkenberg will beat you to seetee, maybe you had better look for him."

They were all waiting, breathless. Anders looked into Ann's eager face. The color had come back under her tan. Her full lips were parted. Her gray eyes were very bright. Now he knew that she was beautiful.

No, Ann O'Banion was too fine and proud and brave for prison. And the Drakes, with all their long effort and patient daring—surely they had earned something better than a cell in the cold iron heart of Pallas IV. Suddenly he was afraid he had to yield.

But he couldn't yield.

Because, somehow, old Drake's stern, battered face turned into the thinner, gray-eyed face of his own father. His father's precise quiet voice came back across the years, all the way from their trips to space in his childhood, reminding him:

"Son, you're going to be an Interplanet engineer. That means you will have to study very hard, to master many fields of science. It means you will have to risk your life many times, because high space just wasn't meant for men. But there's only one thing, really, that you must always

remember. Don't forget it, son—Interplanet men just don't give up."

Now, remembering, Anders looked squarely into Ann's breathless face.

"Sorry." Her look of crushed disappointment set a throb of pain in his throat. He wanted desperately to make her understand, but he knew she never would. "Sorry," he repeated, "but I can't."

Her face was white and bleak again.

"You'll die without a pilot."

"We've got a spaceman's chance." He made a stern little grin. "Now, you see, we know about the mines. I'm going to try to run them with the ship's field dead. That way, we won't trip the peegee units in the mines. More danger from seetee, but we'll have a spaceman's chance."

Watching the eager spirit flow out of her, he felt a pang of pity. Hopefully, he added:

"Unless you want to accept my terms."

She merely shook her head.

Then Anders realized that the photophone was buzzing with a call signal. He turned away from their defiant, disappointed faces to the communications board. He put on the headset. The signal was very weak, difficult to tune. At last, however, he caught it in the field of the pick-up telescope and brought up the volume.

The call wave ceased. For a moment there was only the hissing roar of stellar interference. Then the voice came in. Anders listened and slowly grinned. He turned back to Ann's bleak, determined face.

"A call for you, Miss O'Banion."

She shrank from the extension receiver he offered as if it had been a dangerous thing. He saw Rick's stunned dismay. Old Drake looked older than ever, broken.

"Yes, it's McGee. I can recognize his voice. He knew his narrow beam wasn't likely to be picked up from that direction, except on Freedonia. S'pose he wasn't expecting you to have visitors here."

Anders grinned at their consternation.

"Needn't be afraid you'll give anything away," he added. "Y' see, I already know just about where he is. The readings on the pick-up telescope give his direction, and the signal strength is a fair index to distance. Must be five hundred million kilometers south of the ecliptic plane—maybe you know what he's up to, off out there?"

He thrust the extension receiver at Ann again.

"Better answer," he told her. "He seems in a hurry. And he's so far away your voice will take a long time to reach him."

With a wrathful glance at him, but visibly frightened, too, the girl took the receiver. Standing with the headset on, he grinned back at her and then began making delicate adjustments to align and focus the ship's transmitter.

For even the racing ray of modulated light must take something like half an hour to reach that remote point from which Rob McGee was sending—hundreds of millions of kilometers off all the shipping lanes, and even far beyond the limits of the drift survey. The transmitter beam had to be focused to a thin line of light to span such a distance. It must be aimed exactly, not to miss McGee's receiver. But suddenly he lifted his hand.

"Listen!"

For the high-pitched hum of the call wave had ceased again. Above the stormy roar of starlight they heard the gentle, drawling voice of Rob McGee. It rose and fell on the waves of rushing interference, thinned and distorted. Now and then a word was lost.

". . . wait any longer . . . chance you heard the call wave, and nobody else. Good trip out, though our old friend Anders nearly caught me, back at Pallasport. Miss Karen helped me get away. But I think he's on to something . . . new engine's perfect . . . been here twenty hours."

Silently, the Drakes came up to Ann and bent their haggard, red-stubbled heads to listen at her receiver. Anders had to keep adjusting telescope and amplifier. For it taxed both the receiver and their ears to catch that thin thread of human communication, tossed for nearly half an hour on the storm of interstellar light.

". . . object's all we hoped, but I had better not describe it. Anyhow, that would take a book. But you'll all be glad to know I've found the thing we needed most. Yes, a bedplate!"

Anders saw the slow smile on the tired, patient face of old Jim Drake. He saw bright tears well into the giant's hollow eyes. For a moment the voice of Rob McGee was drowned in the seas of thundering light and then he found it again.

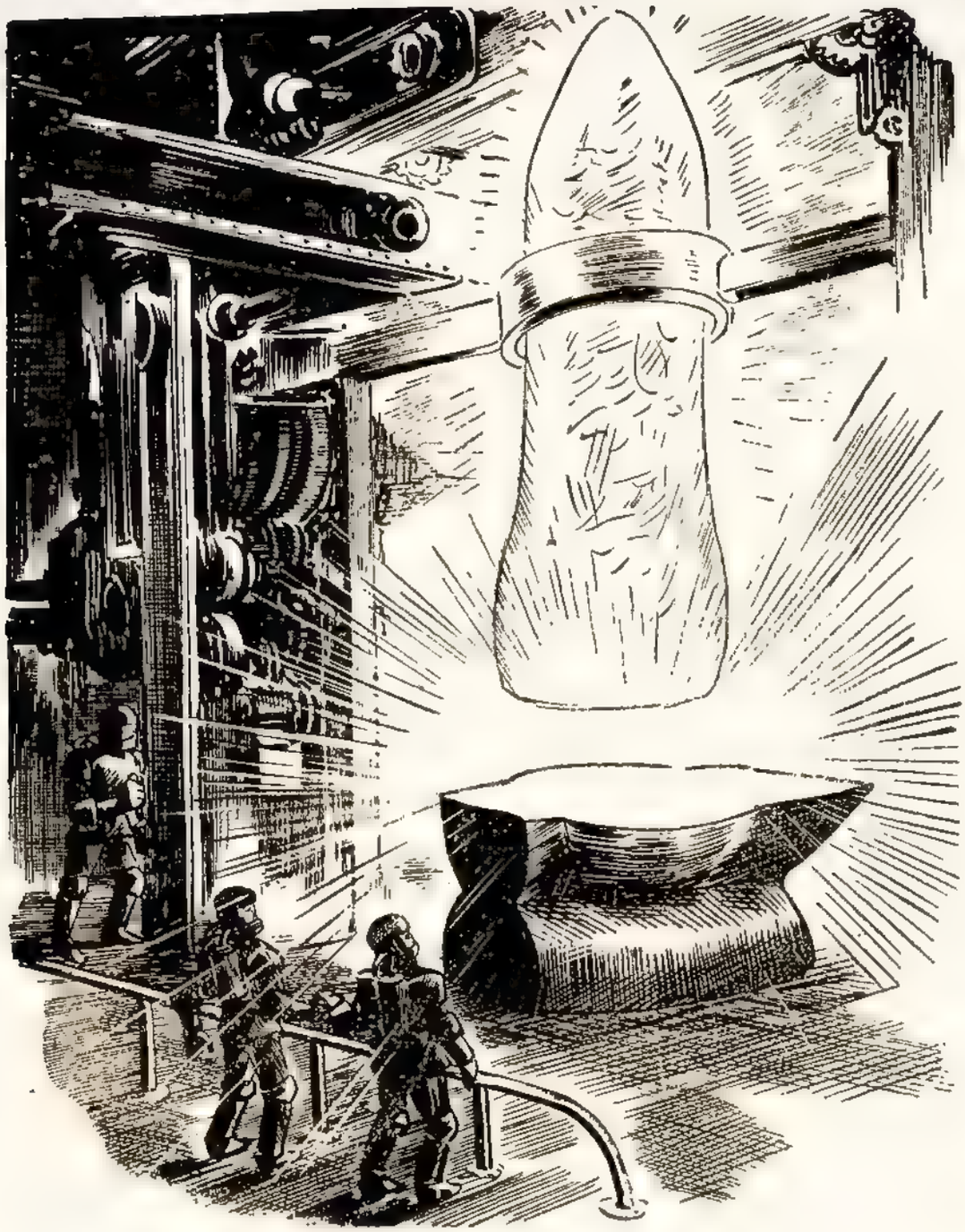
". . . to risk any specifications. But I've cut loose a model for you to take apart. It's rigid as solid metal. And permanent, so it draws no power. It's still as good as new after a hundred thousand years—"

Again they lost his voice in the roaring of the stars.

". . . delay!" It came again, and now Anders could hear the tension of an unfamiliar urgency in the quiet soft voice of Rob McGee. "But a warship followed me here. It's Martian design, and it hailed me in German . . . salvo, when I didn't surrender."

His voice was swept away again on the hurricane of starlight. They waited, listening breathlessly.

". . . damage, but I'm trapped here. If I don't come back you had better give somebody a tip on Franz von Falkenberg. But I still have



got a spaceman's chance. When my time runs out—"

Again the tense drawl faded and it didn't come back. Anders twisted anxiously at the dials. But all he could find was the mighty, untiring tempest of the stars.

VIII.

At last the Earthman stopped the crashing hiss of stellar interference and turned quickly back from the communications board. His black shoulders were straight again, ready for emergency.

"Do I get this right?" His hard steel eyes looked at Ann O'Banion, alert and almost smiling. "McGee has found some seetee machine, built by the Invaders? And there's a bedplate design that he thinks you can use?"

Ann stood white, frozen.

He looked at the Drakes, haggard, red-bearded giants. Their blue eyes were frosty, and they didn't speak. Their breathless anxiety, however, was almost answer enough. And Ann, when he looked back at her, unwillingly nodded.

"So now Franz von Falkenberg has got McGee trapped, somewhere about that machine?" His Earthman's voice had a clipped, metallic ring. "And I s'pose that bedplate would be as useful to the Martians as to you?"

Old Drake nodded bleakly.

"That's true." His deep, patient voice seemed tired, too tired for bitterness. "The bedplate is the only actual difficulty. Once you had it you'd have a bridge to seetee. Given the blueprints for a rigid, permanent bedplate, any competent engineer can do the rest. If von Falkenberg gets away with that model the Martians can be bombarding Panama City with seetee shells within six months."

"Then he won't get away." The brown face of Anders was stern with a lean, eager smile. "I've

got a fighting ship, and I can be out there in less than five days. I'm going out to stop him."

He turned to Ann with a reckless grin.

"Now, gorgeous, y' want to pilot me back through your mines? I'll take the time to land you on Obania. But that's up to you. I can cut the safety field and take my chance on running through."

For a moment Ann stood taut and still. Then her smooth tanned throat pulsed as she swallowed uneasily. She looked at the Drakes. Rick's stubbled face was sternly disapproving. The haggard old man gave her no sign. But she turned back and caught her breath to whisper:

"I'll go with you."

"Wait, Ann!" Rick protested swiftly. "Make him promise something."

"No, she's right." The patient elder giant took Rick's arm. "Franz von Falkenberg has got to be stopped—no matter the cost to us."

"Thanks, Drake." Anders' voice was brisk. "For that, I'll leave you here to watch your shop. If I get that bedplate for Interplanet. p'raps we can make a deal—for we'll be needing seetee engineers. Now you better get off. Give you five minutes."

He called Commander Protopopov and rapped swift orders.

Ann shook Rick's hand. They murmured something, and then the bronze-haired younger giant looked back at Anders with a sudden baffling and somewhat disquieting grin. Old Drake put his arm around the girl as if she were a beloved child and then limped after Rick. But his deep, rusty voice called back cheerfully:

"Good hunting, captain!"

Protopopov, in the after control room, informed him when they were off the ship. Silently, he nodded at Ann. Grave, still a little pale, she thrust her dark head into the periscope hood. The *Challenge* lifted to the touch of her sure brown hands, away from the dock and up again through the wheeling drift and the blinkers and the field of unseen mines. She turned at last to Anders with a quiet report:

"We're free."

"Thank you, Miss O'Banion." Anders smiled. "I'll set up the course for Obania."

"Please, captain." She gave him a shy, determined little smile. "But I'm not going back. You see, we're already accelerating toward McGee's object. I'm going out there with you."

"Eh!" His face was stern. "You can't do that. Take only four hours to land you. Owe you that much for service rendered. Give me the controls."

But she didn't give up the wheel.

"Four hours might be very important to Rob McGee," she told him gravely. "Four hours might let von Falkenberg get back to the seetee lab the Martians have built on Phoso III with that bedplate." Again she made that odd, slight smile. "Besides, I want to come."

Anders merely looked at her for a long quiet moment.

"You've surprised me, Miss O'Banion," he told her softly. "I don't know quite what I expected an asterite girl to be. But you . . . you're fine. I'm sorry that we have to be enemies. And I can appreciate your loyalty to your own world—even if it is a very different world than mine. Really, Ann, I mean—"

Her tanned face looked startled. Something in her gray level eyes made him suddenly as awkward as young Rick Drake. He paused and grinned at himself and went on in a different voice:

"Awf'ly grateful, beautiful, for everything you've done. Now I certainly don't intend to take you into a dangerous operation. 'Nother thing, the presence of unattached female passengers on a ship of war in action isn't exactly approved of, y' know."

For a moment she looked flustered, then:

"You'll just have to manage, captain," she told him cheerfully. "I'm sorry if my presence is going to get you into trouble, but you might have thought of that sooner. Anyhow, you have to take me."

"Eh?" Her cool gray eyes made him flush, and his grin turned sheepish. "Why?"

"You see, I think you're a much nicer man than Franz von Falkenberg," she told him demurely. "Even if you do work for Interplanet. I want you to take that bedplate away from him. I have some information that you need and you may have it if you'll let me go along."

"What information?" he demanded.

She smiled at his curt eagerness, triumphantly.

"You can only guess the distance to McGee's object from the photophone," she said. "You don't know when to begin decelerating. And, if it happened to be in rapid motion, you might miss it altogether. Right, captain?"

He nodded, intently.

"Well, I know the exact position." Her face had a childish glow of victory. "The orbit, too. I know how Cap'n Rob found it and what he thought it was. Now may I go?"

"Let's have that position and the orbit." He grinned at her with an ironic little bow. "And we'll head straight for McGee's object at full acceleration. B'lieve you'd be a match for von Falkenberg himself, beautiful."

She recited the observed position in terms of right ascension, declination and solar distance, waited for Anders to set it up on the keyboard

of the pilot-robot, and then glibly added the six elements of the object's orbit.

The Earthman blinked and had her repeat the figures, reflecting that here was something else that Karen couldn't do. He punched more keys. The mechanism whirred briefly computing a course. He locked the ship upon it and turned back to Ann.

"I'll have a cabin cleared out for you."

"I hope I won't be too much trouble," she protested anxiously.

"None at all." He grinned. "I'll just move into Protopopov's, and he'll take Muratori's, and Muratori will take Omura's—and I s'pose the third engineer will have to swing a hammock somewhere."

"Oh," she said, "I'm sorry."

"But you would come along," he said cheerfully. "Now, about this object?"

Pushing a stool toward her, Anders sat down on the narrow astragation desk. He lit one of his long cigarettes with a jeweled lighter and Ann refused one. She perched on the stool, looked at him and hesitated.

"You know about Rob McGee?" She began with that low-voiced question. "I mean, his mathematical gift? The way he can tell the distance and the mass of a meteor, and all the elements of its orbit, just with a glance?"

Anders nodded. "And always knows the time without a watch. Once I read an article about him, written by a German psychologist who thought he was a human mutation created to fit the environment of space."

"That article hurt Cap'n Rob," she said gravely. "It made him feel a sort of outsider. He's very sensitive about his gift, but it's really wonderful. He used the gift to discover that object."

"But how?"

"You see," she told him eagerly, "it was once when we were all flying from Obania out to Freedonia, aboard the *Jane*. And Rick had brought this book that some Martian-German professor had written about the Invader and the origin of the drift—trying to fix the date of the Cataclysm by tracing all the orbits of the asteroids and the drift back to the common point where the Invader collided with the fifth planet."

"I know the book." Anders grinned. "The author is our friend von Falkenberg."

"Then Cap'n Rob thinks he isn't really very clever."

Anders smiled at her sober tone. He liked her, perched in a childish posture on the tall stool, as if unaware that she was beautiful. Her solemn childish confidence made Franz von Falkenberg seem very far away and altogether harmless. She smiled back, shy and friendly and absorbed.

"Anyhow," she went on eagerly, "Rick happened to mention the book to Cap'n Rob, and the date—that was sometime millions of years ago, according to the professor. Cap'n Rob took his pipe out of his mouth and said the professor was mistaken. Cap'n Rob said he must have failed to take account of all the secondary collisions, between the fragments from the first. Because the actual date of the Cataclysm, he said, was only eighty-seven thousand four hundred sixty-three years ago.

"Rick couldn't quite believe that—he hasn't known Cap'n Rob as long as I have. He wanted to see the figures on paper. But Cap'n Rob hasn't much patience with paper or machine calculations. He says they're all approximations, always a little bit wrong. Anyhow, he just *knows* things. He told Rick that all the forces and reactions involved were too complicated to be put down on paper. And then I think Rick made some thoughtless crack that hurt him.

"Cap'n Rob didn't say very much. He never does. But I could see that he was hurt and brooding. All that night, on the way to Freedonia, he kept searching the whole sky with the periscope. Next morning, just before we landed, he lit his pipe again and offered to show Rick he was right.

"Rick wanted to know how. Cap'n Rob said that there was one fragment from the collision that had been thrown into such an unusual orbit that it couldn't have been affected by any perturbations or secondary collisions. He said he'd never seen it. It was too small and too far away to show in the *Jane's* periscope. But he offered to write down the mass and position of it and let Rick check with a telescope.

"Rick just laughed, but I made Cap'n Rob write down the figures. The object was comparatively small, only about eighty million tons. But it had been thrown off during that collision with a velocity Rick couldn't believe.

"And the orbit was very queer. Extremely elongated, and inclined almost at right angles to the plane of the ecliptic. The body was just about to complete its first revolution, Cap'n Rob said. It was a comet with a period of more than eighty-seven thousand years—just now coming back to the collision point.

"Rick still thought Cap'n Rob was just trying to pull his leg. He said that any such mathematical analysis would take a hundred years, even for a big observatory with a battery of calculating machines. And then it wouldn't be accurate enough to predict the position of such a small body.

"But Cap'n Rob never jokes. I knew that he was serious and I saw his feelings were hurt. I made Rick promise to go out to the observatory on Pallas I and look for the object through one

of the big telescopes there. He and Karen knew some of the young astronomers, so they could manage it.

"And they did, next time Rick and Cap'n Rob were back at Pallasport. I don't know what they told the astronomers. But they set the big telescope on the position Cap'n Rob had written down and there the thing was!"

"Eh!" Anders smashed out his cigarette and slid off the desk. For a moment, looking into Ann's wide, guileless eyes, he suspected that she was concocting a monstrous invention for his confusion.

"I'm not lying, captain." She gave him a staid little smile. "You picked up Cap'n Rob's call just now, remember, from that same position."

"Sorry. Go on."

Grave and eager as a child, he thought, she resumed:

"Even in the big telescope, the thing was just a dot. But still there it was—hundreds of millions of kilometers out of the ecliptic, and coming back to cross it just where Bode's law would put the orbit of the lost fifth planet.

"Rick was pretty much impressed. He went back to the *Jane* and apologized to Cap'n Rob. Rick's a splendid fellow, really," she added soberly, "even if he is pretty much wrapped up in Karen Hood."

Ann's gray eyes were wide and innocent. Something in her voice, nevertheless, told Anders that she knew he had been in love with the red-haired Interplanet heiress, himself. Without knowing exactly why, the Earthman flushed uncomfortably.

"On the way back to Freedonia," Ann went on demurely, "Rick did some calculating of his own. He told Cap'n Rob that the natural forces of the collision couldn't have given the object such a high velocity without it shattering or fusing. Besides, the angle seemed an impossible resultant.

"Rick said it had to be a ship!"

Anders nodded silently. Carefully he lit another cigarette. He had to be careful to keep his brown fingers from trembling. He didn't want the girl to see his excitement—or to guess that he was thinking of von Falkenberg's film, of that broken golden needle and the winding spiral ramp within it, too narrow for the feet of men.

"The thing was just a dot in the telescope," Ann continued gravely. "But Rick thought the edges of it were smooth and asteroids are always jagged. He didn't know quite what to think. He was afraid to believe his own calculations.

"But Cap'n Rob didn't seem surprised. He said he already knew there must have been seetee people on the Invader, because he had seen bits of things they had made. Perhaps some of them had left in a ship, he said, just before the collision, trying to escape. And the ship—if anything so big could really be a ship—must have used a repulsion drive that reacted against the colliding planets.

"Cap'n Rob decided to investigate it. But Rick and his father were just finishing the seetee hammer—they still thought it was going to work—and they couldn't leave it. Rick said there wasn't much you could do with a seetee ship, anyhow, till you learned how to handle seetee.

"Of course, I nearly died to go." Ann smiled from her perch on the stool. "But I had to stay to buy supplies and pilot Erickson through our mine field—we didn't know you were coming.

"Mr. Drake wanted Cap'n Rob to wait. But he has a stubborn streak and he was determined to go on alone. The cranky old engine wasn't dependable enough for such a long voyage, so he had a new one installed. Seems you nearly caught him, back at Pallasport." Her gray eyes were quizzical. "And I guess you know the rest, captain."

"So McGee found a seetee bedplate on that ship!" Anders gave up trying to conceal his excitement. "To carry terrene machines on a seetee foundation, I s'pose? That means that those seetee people . . . things, whatever they were . . . knew how to work terrene matter!"

"Probably." Ann made a tired little yawn and seemed suddenly in danger of falling off the tall stool. "But that's all I know about it. Now I'm sorry if I'm really going to cause all that bother, captain, but I'm awfully sleepy."

"Sorry to keep you up so late." For midnight, Mandate time, had come before they landed on Freedonia. Anders realized that now it was almost time for breakfast. "Sweet dreams, beautiful."

He gave her the key to his vacated cabin and telephoned the astragation officer, on the deck below, to show her down to it. With a shy, heavy-eyed little smile of thanks she slipped gracefully down the companion.

But Anders felt wide awake.

For a long time he stood alone beside the muted click and pur of the pilot-robot, thinking over all that had happened since he walked into Commissioner Hood's metal-walled office at Pallasport, intending to retire from the High Space Guard.

He hadn't expected this adventure—to be driving a warship half a billion kilometers out of the ecliptic, to fight a Martian spy for the priceless wreck of a contraterrene ship derelict for nine hundred centuries!

But he was a practical spatial engineer, used to taking emergencies in stride. This was just another job. He had to beat the asterites and the Martians, and get that seetee bedplate for Interplanet. That was really all that mattered.

Anders felt that he ought to be elated over the prospect of such important and unusual duty, and he couldn't quite define his own vague, uneasy discontent. Annoyed at his own want of spirit, he tried to plan the task ahead.

His most formidable opponent was sure to be von Falkenberg, armed with the advantage of five days' lead. But the Martian, not expecting him, might be still about the wreck. The *Challenge*, Anders felt grimly certain, could outrun and outshoot anything in space.

Then he fell to wondering about the derelict itself. Eighty million tons seemed very big for just a ship. Thinking of the golden needle on von Falkenberg's film, he tried to imagine what sort of beings could have moved on that narrow winding footway, with its handrail too high for men to reach—

TO BE CONCLUDED.

THE ANALYTICAL LABORATORY

The condensed version herewith is necessitated by the lack of free room in the magazine, and two months' labs to be published at once. As you may remember, there was none last month due to the fact that too few letters had reached the office by press date. Herewith, first, the lab on the October issue:

Place	*Story*	*Author*	*Points*
1.	QRM—Interplanetary	George O. Smith	2.34
2.	Anachron, Inc.	Malcolm Jameson	2.78
3.	Lunar Landing	Lester del Rey	3.25
4.	The Wabbler	Murray Leinster	3.50
5.	The Second Solution	A. E. van Vogt	3.75

The high, closely bunched point-scores indicate there was lots of argument. That a brand-new author like George O. Smith walked off with first honors suggests we want him again.

The lab for November went thusly:

Place	*Story*	*Author*	*Points*
1.	Minus Sign	Will Stewart	2.25
2.	Not Only Dead Men	A. E. van Vogt	2.62
3.	Overthrow	Cleve Cartmill	2.8
4.	Four Little Ships	Murray Leinster	3.15
5.	The Gentle Pirates	John Berryman	4.55

In order to have that many stories with point-scores under and very near 3.00, a lot of tied votes were needed. I. e., the first and second place 1s and 2s had to be used more than once per voter. Thus the bunching of stories at the low point-scores.

And finally, the Probability Zero voting on the November issue gives Hal Clement's "Avenue of Escape" first prize of twenty dollars for the best lie of the month, with ten dollars going to Harry Warner for his "Sleep That Slaughtered" and five dollars to Malcolm Jameson for "Eureka" —the point of which a number of letter-writers seemed to have missed completely. Remember? The universal solvent brought in a glass vessel? From a number of remarks made, it would appear Jamie did such a smooth job of passing over that little question many readers missed the zero probability point of the story.

The Editor.

"In Times To Come" was crowded out this month—but A. E. Van Vogt's new novel, "The Weapon Makers," leads off next month. *The Editor.*

BACKFIRE

By Ross Rocklynne

● He wanted immortality; the Board felt he didn't merit it. He had an answer to that. As a demigod he introduced rabble rousing in a time that didn't know it. But the Board had an answer to that—they gave him immortality and—

Illustrated by Kramer

Bruce paused on his way through the gate onto the runway that led to the towering spaceship. He had heard his name called. He turned, and Jan Tomaz, training under Bruce as an Administrator of Physico-Stasis Application Bureau, pushed his way through the moving crowd toward him

"You'll have to call off your trip, Bruce."

Bruce smiled. "By whose authority, Jan?"

"By the authority of the people."

"I don't follow you."

"By the authority," said the other patiently, "of one Thomas Q. Greeley. You're the only one in full possession of the facts of the case. He knows the law. He knows he can demand a hearing any time he wants it. He's over eighteen and he says that he's eligible for immediate decision. He wants his immortality. He says he's been here six weeks, under observation like a guinea pig. He's been wearing the hypnobioscope every night and he's learned the language. He says he's going to have a hearing or else. What the 'or else' means I don't know. Does that sound like a threat to you?"

Jan said it simply, without alarm. In all the twenty-one years of his life, he had never had cause for alarm. Nor had Bruce. Both, although Bruce had been born five hundred thirteen years ago, were cut to a pattern, black of hair and brow, straight-nosed; beneath smooth skin glowed the subtle radiance of immortality. They were dressed loosely, in heavy, patterned silks. This was the year 3555 A. D. and Kearney Field was but one of many spaceports outside New York State City.

Bruce considered the information. He answered finally, "A bluff, Jan. Look the word up in the *World Encyclopedia* of the twenty centuries. Its ingredients are a loud voice and an aggressive manner designed to intimidate another person into an action which does not conform with his desires or beliefs." He fell silent, then shrugged his shoulders and turned. Shortly he was ensconced beside Jan in Jan's *Bullet-nose*, and the ship was lifting soundlessly over the city. He thoughtfully watched the low, dimly lighted skyline, the shimmer of ocean.

He said at length, "Greeley knows the law. He has a quick mind. In his own era, he made his living with his wits, in various guises. He started off as a sideshow barker, and a shyster lawyer was impressed with his voice and his manner and his unusual show of language, and tutored him in the fine art of shystering. A politician in turn heard him in a courtroom, and Greeley took another step upward. Somewhere along the line he was a labor organizer."

"His mind must be very complex," said Jan.

"Not unusually so for his era—which may be," Bruce said thoughtfully, "not so good for us. I wish we could send him back to the twentieth century where he came from."

Jan reached forward and touched certain controls. The ship slanted, hovered, and landed on the roof of the Justice Building. They got out and by elevator descended to Greeley's quarters.

A big man with tousled hair was sitting on the edge of a couch when they came into the room. He had a finely patterned robe wrapped around his body. Items of his clothing littered the floor. A cigar stuck at an acute angle from the corner of his lips, which were sensuously thick. Smoke was drifting away in layers to be swallowed by the ventilator. When he saw the two men, he put two heavily ringed, beefy hands on the edge of the couch and shoved himself energetically erect, and came forward with long, pounding strides.

His eyes flickered over Bruce. "You're the guy that's been studying me, eh? Here. Have a cigar. Sit down," he said when Bruce shook his head. He threw items of clothing off the chair. "Sit down. Damn! Is it true that tobacco's gone out? What will I do *now?* My record's a cigar every two hours." He grinned suddenly, as suddenly stopped grinning. A mocking expression changed

his face subtly. "Sorry I interrupted your joy jaunt. Sit down."

Bruce and Jan sat down without saying anything, and Greeley paced back and forth, exuding smoke, turning his head with quick, birdlike glances, keeping his shrewd, small eyes on Bruce. Bruce crossed his legs, and let his personality dwindle away to a shadow as Greeley, alive with an inductive animal magnetism which showed in every gesture, every tone, every subtle change of expression, went on talking.

"I'm sorry, see?" said Greeley, jutting his head at Bruce impatiently. He flicked ashes in a calcium cloud. "I know you guys got to have your fun same as anybody else. But not at my expense. I can't take it, see? I've got different stuff in me. I feel like I'm in stir. I don't mean behind bars, real bars, I'm talking about this body of mine. I'm imprisoned in mortality. Every second that passes I feel the noose drawing tighter—the Grim Reaper scything along. See what I mean? *You* fellows don't feel that. You never will. Neither will anybody else in this civilization. You'll never die except by accident, but you don't have any accidents; no disease, either. Death! Ugh!"

A very real shudder shook him. Suddenly he sat down, leaning forward, his elbows on his knees. His eyes narrowed on Bruce, grew ugly with fury.

"What's your decision?"

Bruce crossed his legs. He said quietly, "There are several things you don't understand about our civilization, Greeley. Very important things. Maybe you *can't* understand them. I don't know. I've studied the twentieth century in many of its phases, but I confess that I don't completely understand the motives that drove humanity then. Look at our world. I think we've changed human nature. It's taken a long time, but here we are, without disease, either physical or mental. We move quietly and with a contentment which may

be incredible to you. Immortality has helped. We have no death fears.

"But look at our immortality. What good would it be with *fear* in the background? Fear of each other. Of superstition. Fear based on unfounded beliefs. We have eradicated fear—we've cut it away like a tumor." Bruce made an incisive motion with his finger. "So we can appreciate our immortality, because we are not afraid to live. Now a new factor, a twentieth-century being, comes to the thirty-sixth century. The mixture is not good. Such a person, we feel, could not by any stretch of the imagination add to the general welfare of our race; much less add to his own welfare. I operate according to that code of office."

Greeley slid to the very edge of the couch, eyes squinted up against the smoke from the cigar. "What's your decision?" he ground out.

Bruce said, "No."

The big man rose with an oath and threw his cigar violently against the wall. "I thought so," he shouted, his face turning slowly red. "I thought so when you began stalling me three or four weeks ago. All that bunk about studying me. You decided then that I didn't 'fit' into your namby-pamby silk civilization where everybody falls into a mold and too bad for them if they don't.

"You're all eighteen years old, and polite and noble and gentle. You work every other year for four hours a day. The rest of the time, you parasitize off of machines. You're so damned superior you stink. You haven't got an ounce of charity in you. You can't appreciate a man from the twentieth century, born in an age when you had to work your guts out to get any place. When you had to harden up like steel and knocked the other guy down before he took you over the ropes. So now I don't 'fit' and you won't give me immortality."

He burst into a wild, incredulous laugh which abruptly stopped as he fastened his intense, feral eyes on Bruce.

"Why, I'm so superior in real, animal aliveness to you birds," he bit out, "that I wouldn't trade my body or my outlook for a dozen of yours. Noble! Gentle! Courteous! Weak, sniveling, snobbish degenerates, you mean. O. K., O. K. You asked for it. And believe you me, you're going to regret it. You're going to be glad to give me immortality before I'm through with you. It's a promise! Now get out. I know my rights. These are my quarters until I choose to move, and what the hell do you mean walking in without knocking? *Get out!*"

Bruce stood up, face slightly pale. "Come on," he told Jan quietly.

Greeley slammed the door after them.

Bruce hesitated with his well-manicured finger hovering an inch from the elevator button. He turned to Jan, lips flickering with a curious smile. "So that's what they were like," he said slowly. He gave a convulsive shudder.

Bruce Cort, Administrator of the Terrestrial Physico-Stasis Application Bureau, walked the decks of the Alpha Centauri passenger liner. It was his third day out. He had forgotten Greeley entirely, for the problem he presented had been solved. Greeley had received the only death sentence that was possible, and after he had lived his span of years, civilization would go on as it had before; indeed, its even pulse would be not one whit disturbed by Greeley's presence. Bruce Cort walked briskly, five hundred years of life behind him. To all appearance, he was eighteen years of age.

He was vaguely surprised that the decks were empty. Ordinarily, youngsters, both in the changed and unchanged classification, would have been scattered along the transparency of the observation ports goggling at the pure blackness behind and the blackness in front; and stumbling with the difficult explanation of the rainbow ring perpendicular to the ship's course, and of which the ship was ever the center. The ship was traveling at several times the speed of light.

There was no one on deck. Bruce started toward the lower deck, and ran into the captain.

"Hi there, Bruce. Did you hear him?"

"Hear who?"

"Greeley. They've got him tuned in on the Public Wave." Captain Iowa Lasser grinned. "A rather funny chap. Of course, it's ridiculous, but he's got an audience, and they're laughing as they never laughed before. Salon's packed."

Bruce frowned at him and said, "Think I'll go down and listen to that."

"I'll go with you."

As they neared the salon, Bruce heard a wave of laughter that quickly died away. He and Lasser stepped into the salon. From the grating above the orchestra stand Greeley's voice was coming. It was a pleasant voice, powerful, unctuous, rhythmic, modulated as if the speaker were following a scale.

"And them were the days, fellows, believe you me. Thirteen hundred years ago. Standing here on the Square, looking into your beaming, intelligent faces, still I got to admit that compared to the real he-men of my time, all of you are jackasses."

The crow roared. Captain Iowa Lasser giggled a high-pitched sound. He turned to Bruce. "What are jackasses, Bruce?" he gasped.

Bruce stared at him uncomprehendingly. Finally he shrugged. "Look it up in the *Encyclopedia.*" His expression hovered between a frown and an uncertain smile.

"Everything and everybody in *them* days," said Greeley, "was stronger and better built. Them were the men that built your present civilization.

Immortality! I have to laugh. If they'd suspected for one minute that *their* civilization was going to give way to one like *this*, they would have cut their throats. They believed in liberty and freedom and justice for all, they believed in the hallowed tenets that their forefathers laid down. Washington, Lincoln, Roosevelt—their names went ringing down the corridors of time! Why? Because they died, and nobody gave a damn for 'em while they were alive."

The crowd was silent. Lasser's eyes moistened a bit. "He's got a nice choice of phrases, eh?" he asked of Bruce.

Bruce wrinkled his nose.

Lasser, eyes still moist, said, his eyes fastened on the annunciator. "He's got a good point, anyway."

Bruce said patiently, "Just what, captain, is he talking about?"

Greeley was talking again, however. "Civilization! Putrefaction, you mean. Why even the canaries of *my* time was hardier, and believe you me, I got in mind two particular canaries."

The crowd was quiet, tense, as he told a long story of a canary that became involved in a badminton game.

Lasser opened his mouth and bellowed. Bruce hardly heard him above a similarly loud indication of amusement from the crowd. There were tears running down Lasser's cheeks. "A riot, isn't he?" Lasser choked. "What's badminton, anyway?"

"Why," asked Bruce, "are you laughing if you don't know that?"

Lasser gurgled between spasms of laughter, "It's . . . just . . . something in his voice."

Greeley signed off a few minutes later. "So long, folks. Don't forget to tune in on the Public Wave tomorrow at this same time. One hour of fun, riot, and some common sense. This is yours truly, Thomas Q. Greeley, signing off."

Lasser wiped his eyes as the crowd, humming with laughter and talk, disbanded.

"You don't care for him, eh, Bruce?"

Bruce had a faraway, hard look in his eyes. He said slowly, "What do you think about his talk on immortality?"

Lasser's hovering grin faded. "It's good common sense," he said seriously. "Immortality has made us soft. At eighteen years of age we apply for physico-stasis, and physically we never develop beyond eighteen years of age, though mentally it's a different story."

Bruce said, "But in our civilization, with disease wiped out, we don't need anything more than eighteen-year-old bodies, do we?"

"W-well, I guess not. Still"—Lasser shook his head uneasily—"it just makes you wonder, Bruce." He partly changed the subject, looking at Bruce curiously. "What's the story about Greeley, anyway?"

"He appeared out of thin air on the streets one day, talking a different language. I identified his clothing as twentieth century. They put him under a hypnobioscope and taught him the language. His general explanation was that somebody back in the twentieth century wanted to get rid of him, and sent him on a one-way trip with a time machine. Political enemies."

"He doesn't sound like the type to have enemies, Bruce."

Bruce smiled crookedly and told him the rest of the story.

"No! You don't mean to say he *wanted* immortality?" Lasser was plainly shocked.

"He wanted it all right."

"But . . . but from the way he talked—" Lasser began falteringly.

"You believe everything you hear?"

"Why shouldn't I?"

Bruce thought that over. "No reason," he said slowly. "Not in our civilization. But when two civilizations like his and ours get mixed up—" He broke off thoughtfully.

Lasser looked at his watch. "Hard to believe he wants immortality," he muttered, chewing at his upper lip. Then suddenly, "Well, I have to be getting back to the bridge. We're due in at Centauri I in seven hours. Be seeing you." He went clicking away briskly, head down.

Bruce Cort had a ranch on Centauri I. He stayed there three days, but his mind wasn't on his thoroughbred *centaurs*, which weren't really centaurs at all, but six-legged, high-spirited animals indigenous to Centauri I. He found himself tuning in on Greeley's Hour. The man's voice came from Earth at almost infinite velocity, carried through light rays the way electrons are transmitted through a copper wire. He discovered that everybody else on the ranch was listening, too.

Bruce tried to listen without prejudice, which meant that by autohypnosis he had to rid his mind of memory associations of Greeley. He succeeded partly. Greeley's voice was a song, plucking at the emotional centers of his brain. There was no logic in what he said, but it didn't matter. Greeley was a voice which commanded humor and pathos. He damned civilization and aroused no rancor.

"Our civilization," said Greeley, "was built on the word *mother*. Mother! I wish you could have seen mine, fellows. I sure wish you could—and I'd hate to have *you* point out *your* mothers! I'd sicken at the sight of them. Now my mother. She was old. She didn't have a silky face, and curving legs and hips and a sexy smile. She was the way the great Creator meant her to be. She was my *mother!* She had the respect that was due her, and she had a sweet smile, and there were silver hairs amongst the gold. I shudder for this civilization. Where will you find a crowning

glory such as that? Silver hairs among the gold!"

("Nice choice of phrases," Lasser had said, his eyes moist. Probably he was crying now.)

"She died, yes. But was there anything terrible about death? As I sat at her bedside, and clasped her dear old hand in mine, there was no fright in her eyes. She knew she was going to a happier land. She knew that the arms of her Creator were outstretched to gather her to his bosom, and she passed away with a gentle smile on her lips, and her last words were, 'We will see each other again soon, son.' And then she was no more. And I strode away feeling as if I had seen a great truth—for it was then that I saw the real immortality; not an immortality in life, which is but a mockery of the real thing, but an immortality beyond death. I was a happier man for that, fellows, believe you me, when I saw my mother pass into the great beyond."

(Such new thoughts, such beautiful thoughts, such great truths, Lasser was thinking.)

After the broadcast, Bruce decided to go back home. He took a last stroll around his grounds. At the stables were some youths who next year would have their immortality. They were bedding down the *centaurs*, but they stopped at their job and looked at Bruce curiously. With the blunt forthrightness of the race one spoke the thought of all: "You're over a half millennium, aren't you, Bruce?"

Bruce stopped in midstride. The question was strange, since age was of little moment. He smiled quickly. "Five hundred and thirteen. Fourteen next June."

"How many children?"

Bruce thought, "Good heavens!" Out loud, he said, "I've really lost track."

He escaped them with a curiously unsettled state of mind. "They're looking at my hair," he thought in astonishment. He found the stable keeper, and jerked his head.

"What goes on in their heads?"

"Oh." The stable keeper added quickly, "They asked you too, eh? They've been listening to Greeley." He scowled, tentatively touched at his hair. He said uncertainly, "I don't see anything wrong with good healthy black hair, do you? I almost feel ashamed of myself. They ought to squeeze him off the air."

"He's got his prerogative," Bruce reminded him. "Until the demand for the Public Wave doesn't leave him any time he's allowed one hour in twenty-four. I think he'll keep it."

Why he went back to Earth ahead of schedule, Bruce could not have said. But he suspected that he was alarmed. Alarm! Wasn't that a neurotic symptom, to be dealt with quickly at Psychiatry? It was as bad as dreams. And yet, on the three-day trip, the outlawed emotion grew, for a strange thing was happening to this thirty-sixth century civilization. It was in the air, evident in a glance, or whispers; evident in the crowds who gathered to listen to one Thomas Q. Greeley, late of the twentieth century, where life was lived as it should have been lived, where men were he-men, and women were she-women, and mothers were *mothers*, and fathers were *fathers*, where human beings lived the lives their God intended them to live. Immortality! Luciferian device designed to trap men forever in their mortal bodies, to strip them of purpose; to rob them of the incomparable rewards of aging bodies.

Gone was Greeley the humorist. But people listened to him more greedily, and it seemed to Bruce that they were growing mightily ashamed of their smooth faces and their ugly, unsilvered hair.

Bruce came into his office in the Justice Building, stripping his plasticoat from his shoulders, and grinning as Jan Tomaz looked up from behind the big desk, surprise on his face.

Bruce clapped him on the shoulders. "Been keeping the job down?" he questioned, eyes straying to the litter of papers on the desk. "What's this?"

Jan accompanied him awkwardly to the desk. "Rejections," he said nervously.

Bruce shot him a quick glance. "You mean you've been rejecting applicants?"

"No; they've been rejecting their mailed application forms, with letters accompanying."

There was something sharp and stabbing in Bruce's brain. He snatched up half a dozen letters, passed his eyes over them. He made a sound in his throat, and dropped the letters with a little thrust of his hand. "Humph."

He sat down behind the desk, leaned back and crossed his legs, fondling slowly at his chin. A slow, crooked, bitter smile grew on his lips. He nodded his head toward the near wall, where a radio and television utility was built in.

"Greeley comes on in one minute. Put him on." And, as Jan made the necessary adjustments and the screen lighted, "You've been listening to Greeley?"

Jan sat down, with a peculiar hesitation. Bruce noted now that there were peculiar haggard lines around his eyes. A case for Psychiatry. Bruce in that moment diagnosed Jan's case completely and accurately.

"I've been listening to him," said Jan thickly.

"What's your reaction?"

Jan opened his lips to speak, but no words would come forth.

Bruce leaned farther back and put his hands behind his head. "I want you to listen to me, Jan—and I don't want you to listen to Greeley any more." He got up and turned off the radio and televisor. "At least not for a while," he amended. He sat down again.

"I know the way your mind is working," he continued quietly. "You've been in a doubly exposed position, and I only wish you'd have wired me. I'd have come back before I did. Listening to Greeley, *and*, on top of that, reading letters from his supporters, and, still worse, knowing that the man is giving off false opinions, haven't been too good for you.

"Keep in mind, Jan, that Greeley wants the very thing he's condemning."

Jan's head shot up. "That's just it," he said tinnily. "I don't understand it. I'm not a neurotic. At least I wasn't when you left."

"I wish," Bruce said, "you'd have been bulwarked the way I was, Jan. I know twentieth-century history. More, I realize in some small way the outlook they had. They weren't all like Greeley, far from it. But they were hard, and they were immune to jingoism to some degree.

"Greeley, admittedly, doesn't talk sense. Nor does he talk lies. He talks what are ostensibly opinions. Therein, he shows his knowledge of our law. If it could be proven that he talks lies, he would be barred from the ether. As it is, we can't prove that he talks false opinions.

"Greeley doesn't have to talk sense. He has qualities which have never been necessary in our civilization. He's got a voice, for one thing, which reacts solely on the thalamus. In the twentieth century, nothing else was needed. It is notorious fact, and would be true today if anyone wanted to make use of it, that logic, carefully presented facts, does not appeal to the human brain. There's no bridge across which logic can travel to make an actual contact between one person's brain and another.

"Logic is appreciated; but it does not make for action. Men act only through emotion. Greeley's got virgin territory. That's the reason for these letters of rejection we've received. We'll receive more before this thing is over."

Jan sat stone still, face pale and drawn.

"Before it's over?" he jerked out. "When?"

Bruce riffled his hand absently through stacks of letters. "I don't know—yet. I do know that we'll need—a serum."

He laughed quietly. "Not a real serum. Figurative. Picture the twentieth century, Jan. A riot of speeches, and newspapers, and counterspeeches, and emotional jamborees, and 'my dear old mother, silver hairs amongst the gold.' Prophets and fortunetellers and astrologers. Baby-kissing politicians with golden voices and big stomachs. 'My country, right or wrong.' And other nonsense wherein one did not die, one 'passed away.' Churches and faiths all with the same God, only different.

"In this morass, the people lived. They were very hard, or they learned to be hard. They were eternally on their guard, and many of them fought to peer beneath the razzle dazzle of jingoism for the solid cloth of truth. Of course, it was impossible to succeed very much, but they realized the presence of the enemy. To great degree, the civilization was diseased, but there was the fight for immunity.

"Now, out of the madhouse comes one Thomas Q. Greeley, one of the disease germs, and lands in the body—our thirty-sixth century. Thomas Q. Greeley is a very potent disease germ, Jan, and he has not only diseased the body, but the body does not realize the presence of the enemy.

"To cure the body, one needs a serum that will make the body strong enough to throw off its disease.

"Peculiarly, Jan, you're in the position of realizing the disease, but, by certain factors, are suppressed from fighting it, and therefore diseased yourself. Not a pretty picture, is it? But an accurate one, I think. You've got two opposing beliefs fixed in your mind, and it's a mind that's not accustomed to such a problem. And therefore, you're somewhat neurotic. Everybody in the twentieth century had a neurosis in one form or another, and it was the accepted thing, but it caused all the troubles in the world: the futile fight between the conscious and the unconscious, the soldiers being sordid untruths against mathematically precise realism."

Jan drew a long breath. "I feel a little bit better," he admitted.

"We'll have to send you to Psychiatry, anyway, Jan—after it's over. They'll shock your thalamus—all I can do is talk to the prefrontal lobes. In the meantime, go to your quarters and stay there a couple of days, and try not to talk to anybody, particularly about Greeley. Then you might drop back here and maybe I'll have the ingredients of a serum."

After Jan had gone, Bruce sat still, frowning, his lips hovering over the word "maybe."

But presently, he moved, and switched in the televisor, leaving the radio off. The screen lighted, swirled, and the pieces of the picture fell into place. It was seven minutes after three. Greeley was talking.

The pickup took in the Square at the heart of the city. Low buildings bounded it. The Square was jam-packed, and Greeley stood on the platform at the center, facing a microphone and the scanning apparatus. Greeley was talking, throwing his head to the left in little emphatic movements, now and then using his hands, his expression changing subtly and astonishingly with every word. He was a big man, with a little extra fat, and a broad face bisected with a great blade of a nose. He was thirty-two years of age.

Bruce figured there must be twenty or twenty-

five thousand of the Unchanged listening. There were probably some five thousand of the Changed, these latter all being under twenty-five. Bruce diagnosed the situation. Men as old as himself, or in the same magnitude of age, would listen, but they would be resentful. They might even feel shame. Captain Iowa Lasser was two hundred years. The stable keeper was about that. It was likely that the majority of men in that age group felt as they did. Changed and Unchanged, they would be affected. Diseased.

But Bruce knew that he was immune.

Was he the only one that was immune, from here to the farthest inhabited planet of the Universe? That was not likely. There would be a few others—those who understood the twentieth century. Among these would be psychiatrists, almost certainly. But even they would not have Bruce's resistance, because only Bruce understood the game that Greeley was playing.

Bruce's breath came short. Good heavens! From here to the farthest inhabited planet!

What could he do? Tell them Greeley wanted immortality? No. Logic again. Lasser had preferred not to believe him.

Bruce turned the radio on, and as Greeley's voice swelled, cut down for volume. Then he sat down again.

"—cut to a pattern. That's what immortality has done for you, fellows. One color hair and good-looking noses and slim, eighteen-year-old bodies. I sure wish you could have been born in the twentieth century. Look at me!" Greeley slapped his swelling chest. "I'm different. I'm the most distinguished man in this civilization right now. Oh, I'm not conceited. It's a *fact!* I'm *different.* Why are you listening to me instead of to one of your own kind? Because I stand out. I'm older. I show my *age!* I don't hide behind a silk body, skulking, while my mind grows older. I'm not ashamed, see? That's what all of you are. Ashamed. Ashamed of yourselves, and hiding from the benevolent eye of the Creator.

"I wish you could have been born in the twentieth century, fellows. Everybody was different. Everybody stood out. Everybody was looked up to by *somebody.* I don't care who he was. But who looks up to you when you're all at the same level and there's no basis for comparison? Who calls you 'mister'? Why, the youngest brat amongst you calls the oldest by his first name, and there's no respect."

After this broadcast, Bruce sat still, waiting. The waiting was not long. The girl in the outer office stuck her head in the door. She was stuttering, a phenomenon which Bruce had heard of, but not heard. She announced one Thomas Q. Greeley.

Greeley came pounding into the office with long strides, shoving the door shut behind him without a break in his motion. There was a glitter deep beneath his eyes.

"Hello, Cort," he said jovially. "Man, did I panic 'em today? I've got 'em groveling. They worship me." His hand plunged into his pocket and came out with a cigar as he sat down, stretching long legs out before him. He held the cigar up, a grieved expression on his broad face.

"My last one!" he exclaimed. "I'm not smoking it. I'm thinking maybe we can grow some more tobacco the way they grew that chicken heart back in my time."

"That might be possible," Bruce nodded.

"I'll have every last man in this civilization with a cigarette in his mouth before I'm through!" Greeley charged, his eyes cunning with delight as he watched Bruce's reaction.

"Smoking is a delayed manifestation of the suckling instinct," Bruce informed him.

Greeley stared at him. He gave a short laugh. "You birds give me a pain. You've got every human emotion catalogued and under control. It's a damned shame, that's what it is. Why, back in my time—"

Bruce said, "Careful. Now you're beginning to believe your own arguments against immortality."

Greeley's face fell. He hunched forward. "You may be right at that," he said seriously. Then he jumped up, walking furiously back and forth. He stopped and looked at Bruce through beetling brows.

"That's just a sample!" he stated, jerking his thumb in the direction of the Square. "I've got billions of people listening to me. I'm insulting them and they're loving every word of it. This is revolution, Cort—revolution! Can you get that through your head? The civilization of the immortals is about to fall. I'm telling you it will. I'll arouse them to fever pitch. I'll have them charging the Radiogen Hospitals all over the Universe. And I'll get away with it and nobody'll stop me!"

Bruce's eyes lidded. He swung one foot slowly back and forth. "What makes you so sure you can keep on?"

"Because I know the law." Greeley's massive head jutted forward. "You can't stop me, nobody can. I'm not telling lies. I'm giving off good, sound opinions. And I'll have the Square every day because that's what the Square is for. Only nobody has ever used it lately because everybody's got the same opinions as everybody else, and who wants to listen to somebody spout off their own thoughts?

"I've got *new* thoughts, Cort. New for this day and age, anyway." He leered. "More, I know mob psychology. I'll whip them to fever heat. All over the Universe. Nobody listens to the regular broadcasts any more when they can tune

in on Greeley's Hour. It's something new. It's wild and rugged and shocking and it's the truth. So help me, it's the truth. And they know it. Everybody knows it. Everywhere, the Unchanged are sending in rejection letters, saying they don't want immortality. That's only the beginning—if you let me go on. Physico-Stasis Administrators will be affected, too. They won't want their children growing up to become Immortal. Laws will be made banishing immortality.

"Think I can't do it, Cort?"

"Of course you can."

Greeley smashed his hand on the desk, his eyes hot. "Then give me immortality! I'll stop it. I'll wean 'em back the other way, and everything will die down!"

Bruce said, "Perhaps you know that if I gave you immortality, I'd violate my code of office?"

Greeley sneered. "Look who's talking. Instead you prefer to betray humanity. Why, by Heaven, I'll make a one-man conquest of the Universe. I've got the sheer vocal power to do it. I'll break civilization if necessary. Can't you get it through your head that this is the blow-off, the big push? I'm a bull in a china shop!"

"I thought of a better metaphor," said Bruce.

Greeley panted, "And you let a damned code of office stand in your way. Grow up! Back in my time, nobody would have thought twice about violating his code of office to save his own life, or to make an extra thousand bucks. Grow up, Cort. Break a law for a change. I'd have some respect for you if you did!"

Bruce stared at him silently, his eyes curiously expressionless. He said at last, "Come back in two days from now, after the broadcast."

Greeley tried to read his expression. "You'll give me a definite 'yes' or 'no' answer then?"

"That's it."

The muscles of Greeley's face slowly relaxed. He turned and flung open the door. His eyes narrowed. "O. K. I'll be back. But in the meantime, I don't figure on calling off my big guns. I'll go on the air and say what I intended to say, according to plan. 'By!"

The door slammed.

Bruce sat quite still after Greeley's departure, leg swinging idly back and forth.

"Break a law for a change," he whispered at length. A peculiar convulsion crossed his face. His hand was trembling when he worked the radiophone strapped around his wrist.

Seryn Channing, Chief Administrator of the Psychiatry Department of the Radiogen Building, answered.

"Bruce," said Bruce. He moistened his lips. "You've listened to Greeley?"

Seryn hesitated a long moment. At length he said dangerously, "If you mean do I believe that pap of his, no."

Bruce's face showed his relief. He launched into an account of his connection with Greeley.

"Our peculiar system of law—peculiar from the standpoint of the twentieth century, that is—will let him get away with it, as long as he wants to carry on. We can't stop him, not by direct action. But he has to be stopped."

Seryn said dryly, "You admit the man has us in a trap we can't escape from. In the same breath, you say we have to escape. Where's the logic?"

Bruce was patient. "In all my four hundred years taking care of the Bureau in the City, Greeley is the first I've ever refused immortality. But now—" He stopped, and went on with difficulty, his face whitening imperceptibly. He talked for several minutes, while the other man listened.

A silence followed. Seryn said slowly, "You can't do that, Bruce."

"Can't I?" Bruce laughed unsteadily. "I've made up my mind. If I fail in my plan, I've broken the law most drastically, and doubtless will be given my punishment.

"If I succeed, I will have adhered to the letter of the law. I want you to keep this under your hat, and I want you to take care of it when we get there. I'll take the blame. In the meantime, the more rabid he gets his followers, the better it'll be. For us."

Greeley showed up on the dot, half an hour after the broadcast. He was wiping his heavy face. "I've got 'em yelling now, 'Down with immortality.' Sometimes I scare myself. I made a labor chain out of five thousand department stores in the States—back in my time—but that took some talking and pamphlets and banners. All you got to do here is talk; say anything. You're a bunch of dopes. I got trouble holding them in now."

He sat down heavily. "Tomorrow they'll bust loose if I give 'em the word, Cort. Unless I do something about it. What is it about my voice that gets 'em? Must be the same thing that Hitler had. Hitler was a dictator," he explained, but Bruce nodded. "He was going strong when I was spirited away." He scowled in memory. "Whatever happened to him, anyway?"

"He died in Spitzbergen in 1944," said Bruce. "He was defeated in the spring of 1943."

Greeley sighed. "He was a good organizer, too." He eyes wandered restlessly about the room, and finally centered on Bruce's impassive face. "Well," he scowled, "I'm waiting. You told me to come back in two days. Here I am."

Bruce said, "We're due at the Radiogen Laboratories at four o'clock."

"I thought so," Greeley said, heaving himself to his feet. "You're getting smart, eh?"

"I've simply decided you're worthy of immortality."

Greeley looked at him admiringly. "I'll be damned if I don't think you would have made a good politician. You're smart. It don't pay to buck the current, Cort," he said in satisfaction. "Let's go."

"It's a simple process," Bruce explained in answer to Greeley's avid, yet somewhat apprehensive questions as they sped along comfortably high above the city. "At the core of body cells there are what are known as radiogens—the real life principle. Only they're also inverted with the properties of death. Sooner or later they deteriorate. A new cell has been developed by biologists. They remove the deteriorating elements, then remake an old body out of them. You'll live seven years in the radiogen chamber, and quite literally you'll come out a new man. A complete new body. It'll really take only a couple hours, but you won't know anything from the minute you go in to the minute you come out."

"You've got a good civilization here," said Greeley, nodding his heavy head in satisfaction.

Bruce smiled tightly. He looked sidewise at the big man. "You don't mistrust me?"

Greeley grinned mockingly. "Hell, no, I don't. You fellows can't tell a lie. You believe in the good things of life. You couldn't commit a crime. I know psychology. You go at things fair and square."

He added hastily, "Not that I don't appreciate it. Believe you me, I do. Tomorrow, with some long centuries ahead of me, I'll start my little game of backtracking with the mob, like I promised. You've got the word of Mrs. Greeley's little boy!"

Bruce guided the foolproof craft to a landing, thinking his own unexpressed thoughts. *What will you do after you're given your immortality, Mrs. Greeley's son? Where will you find a substitute for the rotten, jangling excitement of the twentieth century that your nerves demand? What will you do to our civilization when you begin to get restless for the sounds and smells of corruption that aren't here?* So Bruce's thoughts ran.

Seryn Channing met them, and himself gave Greeley the anæsthetic. Bruce saw Greeley wheeled into the radiogen chamber, saw the door close, saw the interior of the chamber grow foggy. Bruce tried to control his nerves, and recognized it as a neurotic symptom. He found himself dwelling with peculiar introspect on the intricacies of a mind which could commit a crime, or otherwise break a law, either in a moral or legal sense. But at the end of two hours, Greeley came out of the chamber a new man, and, strangely silent, returned with Bruce to his quarters in the Justice Building. Greeley's skin shone with the almost undetectable inner radiance of immortality.

Bruce went back to his offices, and sat in the dark, trying to untangle his thoughts. It seemed to him, then, as if the greatest danger was not to civilization, but to himself. He might lose his respect for himself. Back in the twentieth century, however, such loss of integrity must have been very common.

The luxury of integrity! Tomorrow, if he failed, he would have loosed upon humanity an incurable malady in the person of one Thomas Q. Greeley.

Half an hour before Greeley was due on the air, Bruce called Jan Tomaz. The recently Changed man came into the office slowly, hesitantly, as if in shame for his partial breakdown. The lines of strain were somewhat gone from his face. Bruce was almost jovial when he spoke, but it was evident to him that that was a symptom of hysteria.

He said, watching Jan narrowly, "I've purposely put off telling you this to the last minute, because I saw nothing to be gained by giving you time to think. There's no one else for the job, though. I'll have to send you to the infected area, Jan."

A pathetic despair tugged suddenly at Jan's face. Bruce winced. He said patiently, "I mean that I want you to use your prerogative on the Square."

He rapidly told Jan what he wanted him to do. He concluded, "If you use words with emotional connotations, the chances of success are increased. *But*—don't let Greeley get the microphone afterward."

Jan looked at Bruce as if Bruce had subtly betrayed him. He stuttered, "B-but if it doesn't work?"

"It has to work, Jan."

Bruce held Jan's eyes, and walked forward until he was a few inches separated from the younger man.

He shouted full into Jan's face: "Go ahead!"

Jan had no defense against such a highly emotional command. He left the room on a run.

Bruce turned on the televisor and auditory unit, and immediately heard the subway rumble of the mob. A twentieth-century mob, flaming with infected passions, dangerous, furious, solidly packed on the Square around the dais, waiting for Greeley to come up through the trapdoor in the floor of the dais, eager to drink in his voice, his expressions, his logic. They were a mob that only Greeley could handle. But what species of logic was he intending to use that would turn off the flame beneath their steaming hatred of immortality?

Bruce stood quite still, waiting for Greeley to appear. Each heartbeat was a second. Bruce marveled. Had this alarm, these uncertain stabs of agony, these shortenings of the breath, been a regular part of twentieth-century life? Yet man had

lived through it. There were the wars, for instance. And other pestilences. These things were gone by the turn of the thirty-first century. Then, in the thirty-sixth century, along had come one Thomas Q. Greeley—

At one minute of three o'clock, Greeley came up onto the dais from stairs connected with the underground tunnel. The mob gave him their ovation. They were thunder and lightning, Bruce thought, but the lightning was submerged. They were standing on tiptoe.

Greeley was looking at his watch, waiting.

Bruce saw Jan in the fore of the mob now. He was working his way toward one of the two broad stairs that led to the top of the dais. He made the dais, and to Bruce he looked very small compared to Greeley. Jan was small in other ways, too, he saw with sinking heart. When Jan grabbed the microphone and spoke, his voice was high, without volume, without compulsion. Furthermore, it was muted, overridden by the voice of the mob. Jan was demanding the prerogative of the Public Wave. The seconds ticked away, and the cheering died down in some measure.

Jan's desperate voice blasted out. "Citizens! Behind you stands the man who has showed you the truth about immortality."

There were some half-hearted cheers of agreement. Bruce slowly, helplessly, shook his head back and forth.

"He has showed you the *sins* of immortality!"

This elicited a greater response. The building surrounding the Square threw back thundering echoes. Greeley was standing stone still, wary of face, looking at Jan with his heavy brows drawn suddenly down. He started forward suddenly, his jaw hanging open in an amazed, blistering curse.

Jan saw him coming. He dramatically pointed his arm at Greeley and yelled, "Examine his skin! Yesterday he was made immortal, at his own request."

An invisible switch was thrown and there was no sound. Nor was there motion, save that of Greeley. Greeley came up on Jan's left and his big arm went up and shoved Jan against the railing. Greeley made a furious grab for the microphone. His voice bit out, "Fellows—" But it was a voice filled with scalding panic, for Greeley must have seen the youths who suddenly urged themselves up the stairs. He turned with a flurry of panic contorting his face. By that time, the youths were on him. They grabbed at his arms and held him. Then Greeley went down, submerged in a tangle of human beings. The microphone went down, too.

"Fellows," came Greeley's voice, but it was a high-pitched scream of protest. A roar rippled over the crowd, spreading outward from the dais. A stream of human beings came surging up onto the dais.

Bruce vainly tried to pick Jan from the sickening carnival of motion and sound. But he couldn't keep his fascinated eyes from Greeley. The man was suddenly held aloft. His clothing had been stripped from his body. Red furrows were on his skin. His neck was hanging at an unnatural angle. Bruce guessed that he was dead. They had examined Greeley's skin.

He turned away from the scene, and sat down, holding his sick head in his hands. By the time Jan showed up twenty minutes later, he had rationalized and was calmer. Jan's clothing was in shreds, and his hair was mussed.

"It was sickening," he choked. He buried his head in his hands, and then raised his eyes and stared at Bruce as if in a fascination of horror. "How could you have plotted a thing like that, Bruce! It wasn't even human!"

Bruce felt an inner convulsion. He had broken no law, not a legal law. Greeley had served the best interests of humanity by being made immortal. Proof: he was dead. But what about other laws, moral laws?

"We're both patients for the Psychiatry Department, Jan," he said grimly. "Looked at that way, my actions are justified. We found a serum and administered it. The corpuscles in the area of infection received the strength they needed to overthrow the disease. The wound will, therefore, heal and the body will eventually rid itself of the toxic substances the disease left behind.

"Greeley, I think, realized he was a disease, even if he didn't think of that exact metaphor. What he overlooked was the fact that he might disease *me*. He did. When one wishes to discommode, or otherwise render one's enemies impotent, one stoops to a trick. So Greeley taught me, not realizing that since I'm considered an authority on the twentieth century, I was extremely susceptible to contamination from his brand of ethics, and, therefore, no longer incapable of deceit. I applied the principle of trickery to Greeley, administering a body blow below the belt. Place the blame on him, Jan, not me. He backfired on himself."

THE END.

THE SEARCH

By A. E. van Vogt

● **Ten days of memory gone. Ten days dropped out of his life. To find those ten days he tried to retrace his path and found it never had been!**

Illustrated by Orban

The hospital bed was hard under his body. For a tense moment it seemed to Drake that that was what was bothering him. He turned over into a more comfortable position—and knew it wasn't physical at all. It was something in his mind, the sense of emptiness that had been there since they had told him the date.

After what seemed a long time, the door opened, and two men and a nurse came in. One of the men said in a hearty voice:

"Well, how are you, Drake? It's a shame to see you down like this."

The man was plumpish, a good-fellow type. Drake took his vigorous handshake, lay very still

for a moment, and then allowed the awkward but necessary question to escape his lips:

"I'm sorry," he said stiffly, "but do I know you?"

The man said: "I'm Bryson, sales manager of the Quik-Rite Co. We manufacture fountain pens, pencils, ink, writing paper and a dozen kindred lines that even grocery stores handle.

"Two weeks ago, I hired you and put you on the road as salesman. The next thing I knew you were found unconscious in a ditch, and the hospital advised me you were here."

He finished: "You had identification papers on you connecting you with us."

Drake nodded. But he felt tense. It was all very well to have someone fill a gap in your mind, but— He said finally:

"My last remembrance is my decision to apply for a job with your firm, Mr. Bryson. I had just been turned down by the draft board for an odd reason. Apparently, something happened to my mind at that point and—"

He stopped. His eyes widened at the thought that came. He said slowly, conscious of an unpleasant sensation:

"Apparently, I've had amnesia."

He saw that the house doctor, who had come in with Bryson, was looking at him sharply. Drake mustered a wan smile.

"I guess it's all right, doc. What gets me is the kind of life I must have lived these last two weeks. I've been lying here straining my brain. There's something there in the back of my mind that—"

The doctor was smiling behind his pince-nez. "I'm glad you're taking it so well. Nothing to worry about, really. As for what you did, I assure you that our experience has been that the victim usually lives a reasonably normal life. One of the most frequent characteristics is that the victim takes up a different occupation. You didn't even do that."

He paused, and the plump Bryson said heartily: "I can clear up the first week for you. I had discovered, when I hired you, that you'd lived as a boy in some village on the Warwick Junction-Kissling branch line. Naturally, I put you on that route.

"We had orders from you from five towns on the way, but you never got to Kissling. Maybe that will help you. . . . No!" Bryson shrugged. "Well, never mind. As soon as you're up, Drake, come and see me. You're a good man, and they're getting scarce."

Drake said: "I'd like to be on the same territory, if it's all right."

Bryson nodded. "Mind you, it's only a matter of finishing up what you missed before, and then moving farther along the main line. But it's yours, certainly. I guess you want to check up on what happened to you."

"That," said Drake, "is exactly what I have in mind. Sort of a search for my memory." He managed a smile. "But now . . . but now, I want to thank you for coming."

"S'all right. S'long."

Bryson shook hands warmly, and Drake watched him out of the door.

Two days later, Drake climbed off the *Transcontinental* at Warwick Junction, and stood blinking in the bright sun of early morning. His first disappointment had already come. He had hoped that the sight of the cluster of houses silhouetted against a canyon would bring back memories.

It had, but only from his boyhood when he and his parents had passed through the Junction on various trips. There were new houses now, and the railway station hadn't been there twenty years before.

Too obviously his mind was not being jarred into the faintest remembrance of what he had done or seen sixteen days earlier.

Drake shook his head in bewilderment. "Somebody knew me," he thought. "Somebody must have seen me. I talked to storekeepers, travelers, trainmen, hotel men. I've always had a sociable bent, so—"

"Hello, there, Drake, old chap," said a cheerful voice beside him. "You look as if you're thinking about a funeral."

Drake turned, and saw a rather slender young chap, dark-faced and dark-haired, about thirty years old. He had the slouch of too-thin people who walk too much carrying sample cases, and he must have noticed something in his, Drake's, eyes, for he said quickly:

"You remember me, don't you—Bill Kellie!" He laughed easily "Say, come to think of it, I've got a bone to pick with you. What did you do with that girl, Selanie? I've been twice past Piffer's Road since I last saw you, and she didn't come around either time. She—"

He stopped, and his gaze was suddenly sharp. "Say, you do remember me, don't you?"

To Drake, the astounding if not notable fact was that Piffer's Road should be the place name. Was it possible that he had got the idea of going to the farmhouse where he had been born, to look the old homestead over? He emerged from his intense inner excitement, and realized from the expression on Kellie's face that it was time to explain. He finished finally:

"So you see, I'm in quite a mental fix. Maybe, if you wouldn't mind, you could give me some idea of what happened while I was with you. Who is this girl, Selanie?"

"Oh, sure," said Kellie, "sure, I'll—" He paused, frowned. "You're not kiddin' me, are you?" He waved Drake silent. "O. K., O. K., I'll believe you. We've got a half-hour before the Kissling

local is due. Amnesia, eh? I've heard about that stuff, but— Sa-a-ay, you don't think that old man could have had anything to do with—" He banged his right fist into his left palm. "I'll bet that's it."

"An old man!" Drake said. He caught himself, finished firmly: "What about this story?"

The train slowed. Through the streaky window, Drake could see a rolling valley with patches of green trees and a gleaming, winding thread of water. Then some houses came into view, half a dozen siding tracks, and finally the beginning of a wooden platform.

A tall, slim, fine-looking girl walked past his window carrying a basket. Behind Drake, the traveling salesman, who had got on at the last stop, and to whom he had been talking, said:

"Oh, there's Selanie. I wonder what kind of supergadget she's got for sale today."

Drake leaned back in his seat, conscious that he had seen all of Piffer's Road that he cared to. It was queer, that feeling of disinterest. After all, he had been born three miles along the road. Nevertheless, there it was. He didn't give a darn. His mind fastened only slowly on what the other had said.

"Selanie!" he echoed then. "Curious name! Did you say she sells things?"

"*Does* she sell things!" the man, Kellie, exploded.

He must have realized the forcefulness of his words, for he drew a deep, audible breath; his blue eyes looked hard at Drake. He started to say something, stopped himself, and finally sat smiling a secret smile.

After a moment, he said: "You know I really must apologize. I've just now realized that I've monopolized the conversation ever since we started talking."

Drake smiled with polite tolerance. "You've been very entertaining."

Kellie persisted: "What I mean by that is, it's just penetrated to me that you told me you sold fountain pens, among other things."

Drake shrugged. He wondered if he looked as puzzled as he was beginning to feel. He watched as Kellie drew out a pen, and held it out for him to take. Kellie said:

"See anything queer about that?"

The pen was long, slender, of a dark, expensive-looking material. Drake unscrewed the cap slowly —slowly, because in his mind was the sudden, wry thought that he was in for one of those pointless arguments about the relative merits of the pens he was selling and—

He said quickly: "This looks right out of my class. My company's pens retail for a dollar."

The moment he had spoken, he realized he had left himself wide open. Kellie said with a casual triumph:

"That's exactly what she charged me for it."

"Who?"

"Selanie! The girl who just got on the train. She'll be along in a few minutes selling something new. She's always got an item that's new and different."

He grabbed the pen from Drake's fingers. "I'll show you what's queer about this pen."

His fingers reached toward a paper cup that stood on the window sill. He said with an irritating smugness: "Watch!"

The pen tilted over the cup; Kellie seemed to press with his finger on the top—and ink began to flow.

After about three minutes, it filled the cup to the brim. Kellie opened the window, carefully emptied the blue liquid onto the ground between the coach and the platform—and Drake erupted from his paralysis.

"Good heavens!" he gasped. "What kind of a tank have you got inside that pen? Why, it—"

"Wait!"

Kellie's voice was quiet, but he was so obviously enjoying himself that Drake pulled himself together with a distinct effort. His brain began to whirl once more, as Kellie pressed the top again, and once again ink began to flow from the fantastic pen. Kellie said:

"Notice anything odd about that ink?"

Drake started to shake his head, then he started to say that the oddness was the quantity, then he gulped hoarsely:

"*Red* ink!"

"Or maybe," Kellie said coolly, "you'd prefer purple. Or yellow. Or green. Or violet."

The pen squirted a tiny stream of each color, as he named it. In each case, he turned the part he was pressing ever so slightly. Kellie finished with the triumphant tone of a man who has extracted every last drop of drama from a situation:

"Here, maybe you'd like to try it yourself."

Drake took he remarkable thing like a connoisseur caressing a priceless jewel. As from a great distance he heard Kellie chattering on:

"—her father makes them," Kellie was saying. "He's a genius with gadgets. You ought to see some of the stuff she's been selling on this train the last month. One of these days, he's going to get wise to himself, and start large-scale manufacture. When that day comes, all fountain pen companies and a lot of other firms go out of business."

It was a thought that had already occurred to Drake. Before he could muster his mind for speech, the pen was taken from his fingers; and Kellie was leaning across the aisle toward a

handsome gray-haired man who sat there. Kellie said:

"I noticed you looking at the pen, sir, while I was showing it to my friend. Would you like to examine it?"

"Why, yes," said the man.

He spoke in a low tone, but the sound had an oddly rich resonance that tingled in Drake's ears. The old man's fingers grasped the extended pen and—just like that—the pen broke.

"Oh!" Kellie exclaimed blankly.

"I beg your pardon," said the fine-looking old man. A dollar appeared in his hand. "My fault. You can buy another one from the girl when she comes."

He leaned back, and buried himself behind a newspaper.

Drake saw that Kellie was biting his lip. The man sat staring at his broken pen, and then at the dollar bill, and then in the direction of the now hidden face of the gray-haired man. At last, Kellie sighed:

"I can't understand it. I've had the pen a month now. It's already fallen to a cement sidewalk, and twice onto a hardwood floor—and now it breaks like a piece of rotted wood."

He shrugged, but his tone was complaining as he went on after a moment: "I suppose actually you can't really expect Selanie's father to do a first-rate job with the facilities he's got—"

He broke off excitedly: "Oh, look, there's Selanie now. I wonder what she's featuring today."

A sly smile crept into his narrow face. "Just wait till I confront her with that broken pen. I kidded her when I bought it, told her there must be a trick to it. She got mad then, and guaranteed it for life— What the devil is she selling, anyway? Look, they're crowding around her."

Quite automatically, Drake climbed to his feet. He craned his neck the better to see over the heads of the crowd that was watching the girl demonstrate something at the far end of the car.

"Good heavens!" a man's deep voice exclamed. "How much are you charging for those cups? How do they work?"

"Cups!" said Drake, and moved toward the group in a haze of fascination. If he had seen right, the girl was handing around a container which kept filling full of liquid. And people would drink, and it would fill again instantly.

Drake thought: The same principle as the fountain pen. Somehow, her father had learned to precipitate liquids and—

His brain did a twisting dive, then came up spinning. What . . . in . . . kind of gadget genius was there behind this . . . this priceless stuff? Why, if he, Drake, could make a deal with the man for the company, or for himself, he was made. He—

He was trembling violently; and the tremendous thought ended, as the girl's crystal-clear voice rose above the excited babble:

"The price is one dollar each. It works by chemical condensation of gases in the air; the process is known only to my father—but wait, I haven't finished my demonstration."

She went on, her voice cool and strong against the silence that settled around her:

"As you see, it's a folding drinking cup without a handle. First, you open it. Then you turn the top strip clockwise. At a certain point, water comes. But now—watch. I'm turning it farther. The liquid is now turning green, and is a sweet and very flavorsome drink. I turn the strip still farther, and the liquid turns red, becomes a sweet-sourish drink that is very refreshing in hot weather."

She handed the cup around; and it was while it was being passed around from fingers to clutching fingers that Drake managed to wrench his gaze from the gadget, and really look at the girl.

She was tall, about five feet six, and she had dark-brown hair. Her face was unmistakably of a fine intelligence. It was thin and good-looking, and there was an odd proud tilt to it that gave her a startling appearance of aloofness in spite of the way she was taking the dollar bills that were being thrust at her.

Once again, her voice rose: "I'm sorry, only one to a person. They'll be on the general market right after the war. These are only souvenirs."

The crowd dissolved, each person retiring to his or her individual seat. The girl came along the aisle, and stopped in front of Drake. He stepped aside instinctively, and then abruptly realized what he was doing.

"Wait!" he said piercingly. "My friend showed me a fountain pen you were selling. I wonder—"

"I still have a few," she nodded gravely. "Would you like a cup, also?"

Drake remembered Kellie. "My friend would like another pen, too. His broke and—"

"I'm sorry, I can't sell him a second pen." She paused there. Her eyes widened; she said with a weighty slowness. "Did you say—*his* broke?"

Astoundingly, she swayed. She said wildly: "Let me see that. Where is your friend?"

She took the two pieces of fountain pen from Kellie's fingers, and stared at them. Her mouth began to tremble. Her hands shook. Her face took on a gray, drawn look. Her voice, when she spoke, was a whisper:

"Tell me . . . tell me, how did it happen? *Exactly* how?"

"Why"—Kellie drew back in surprise—"I was

handing it to that old gentleman over there when—"

He stopped because he had lost his audience. The girl spun on her heel—and that was like a signal. The old man lowered his paper, and looked at the girl.

She stared back at him with the fascinated expression of a bird cornered by a snake. Then, for a second time within two minutes, she swayed. The basket nearly dropped from her hand as she ran, but, somehow, she hung on to it, as she careened along the aisle.

A moment later, Drake saw her racing across the platform. She became a distant, running form on Piffer's Road.

"What the hell!" Kellie exploded.

He whirled on the old man. "What did you do to her?" he demanded fiercely. "You—"

His voice sank into silence, and Drake who had been about to add his hard words to the demand remained quiet, also.

The salesman's voice there under the bright sun, on the platform at Warwick Junction, faded. It required a moment for Drake to grasp that the story was finished.

"You mean," he demanded, "that's all? We just sat there like a couple of dummies out-faced by an old man? And that was the end of the business? You still don't know what scared the girl?"

He saw that there was the strange look on Kellie's face of a man who was searching mentally for a word or phrase to describe the indescribable. Kellie said finally:

"There was something about him like . . . like all the tough sales managers in the world rolled into one, and feeling their orneriest. We just shut up."

It was a description that Drake could appreciate. He nodded grimly, said slowly: "He didn't get off?"

"No, you were the only one who got off."

"Eh?"

Kellie looked at him. "You know, this is the damnedest, funniest thing. But that's the way it was. You asked the trainman to check your bags at Inchney. The last thing I saw of you before the train pulled out, you were walking up Piffer's Road in the direction the girl had gone and— Ah, here comes the Kissling local now."

The combination freight and passenger train backed in weightily. Later, as it was winding in and out along the edge of a valley, Drake sat staring wonderingly at the terrain so dimly remembered from his boyhood, only vaguely conscious of Kellie chattering beside him.

He decided finally on the course he would take: This afternoon he'd get off at Inchney, make his rounds until the stores closed, then get a ride in some way to Piffer's Road, and spend the long, summer evening making inquiries. If he recollected correctly, the distance between the large town and the tiny community was given as seven miles. At worst he could walk back to Inchney in a couple of hours—

The first part proved even simpler than that. There was a bus, the clerk at the Inchney Hotel told him, that left at six o'clock.

At twenty after six, Drake climbed off, and, standing in the dirt that was Piffer's Road, watched the bus throb off down the highway. The sound faded into remoteness as he trudged across the railway track.

The evening was warm and quiet, and his coat made a weight on his arm. It would be cooler later on, he thought, but at the moment he almost regretted that he had brought it.

There was a woman on her knees, working on the lawn at the first house. Drake hesitated, then went over to the fence, and stared at the woman for a moment. He wondered if he ought to remember her. He said finally:

"I beg your pardon, madam."

She did not look up; she did not rise from the flowerbed, where she was digging. She was a bony creature in a print dress, and she must have seen him coming to be so obstinately silent.

"I wonder," Drake persisted, "if you can tell me where a middle-aged man and his daughter live. The daughter is called Selanie, and she used to sell fountain pens and drinking cups and things to people on the train. She—"

The woman was getting up. She came over. At close range, she didn't seem quite so large or ungainly. She had gray eyes that looked at him with a measure of hostility, then with curiosity.

"Sa-a-ay," she said sharply, "weren't you along here about two weeks ago, asking about them? I told you then that they lived in that grove over there."

She waved at some trees about a quarter of a mile along the road, but her eyes were narrowed, wintry pools as she stared at him. "I don't get it," she said grimly.

Drake couldn't see himself explaining about his amnesia to this crusty-voiced, suspicious creature, and he certainly wasn't going to mention that he had once lived in the district. He said hastily:

"Thank you very much. I—"

"No use going up there again," said the woman. "They pulled out the same day you were there last time . . . in their big trailer. And they haven't come back."

"They're gone!" Drake exclaimed.

In the intensity of his disappointment, he was about to say more when he grew conscious that the woman was staring at him with a faint, satisfied smile on her face. She looked as if she had suc-

cessfully delivered a knock-out blow to an unpleasant individual.

"I think," Drake snapped, "I'll go up and have a look around, anyway."

He spun on his heel, so angry that for a while he scarcely realized that he was walking in the ditch and not on the road. His fury yielded slowly to disappointment, and that in turn faded before the realization that, now that he was up here, he *might* as well have a look.

After a moment, he felt amazed that he could have let one woman get on his nerves to such an extent in so short a time.

He shook his head, self-chidingly. He'd better be careful. This business of tracking down his memory was beginning to wear on him.

A breeze sprang up from nowhere as he turned into the shadowed grove. It blew softly in his face, and its passage through the trees was the only sound that broke the silence of the evening.

It didn't take more than a moment to realize that his vague expectations, the sense of—something—that had been driving him on to this journey was not going to be satisfied.

For there was nothing, not a sign that human beings had ever lived here; not a tin can, or a bundle of garbage, or ashes from a stove. Nothing.

He wandered around disconsolately for a few minutes, poked gingerly with a stick among a pile of dead branches—and finally walked back along the road. This time it was the woman who called to him.

He hesitated, then went over. After all, she might know a lot more than she had told. He saw that she looked more friendly.

"Find anything?" she said with an ill-restrained eagerness.

Drake smiled grimly at the power of curiosity, then shrugged ruefully. "When a trailer leaves," he said, "it's like smoke—it just vanishes."

The woman sniffed. "Any traces that were left sure went fast after the old man got through there."

A thrill like flame coursed through Drake. "The old man!" he exclaimed violently.

The woman nodded, then said bitterly: "A fine-looking old chap. Came around first inquiring from everybody what kind of stuff Selanie had sold us. Two days later, we woke up in the morning, and every single piece was gone."

"Stolen!"

The woman scowled. "Same thing as. There was a dollar bill for each item—but that's stealing for those kind of goods. Do you know, she had a frying pan that—"

"But what did he want?" Drake interrupted, bewildered. "Didn't he explain anything when he was making his inquiries? Surely, you didn't just let him come around here asking questions."

To his astonishment, the woman flushed, then she looked flustered. "I don't know what came over me," she confessed finally, sullenly. "There was something about him. He looked kind of commandinglike and important, as if he was a big executive or something; and besides he—"

She stopped angrily. "The scoundrel!" she snapped.

Her eyes narrowed with abrupt hostility. She peered at Drake. "You're a fine one for saying did we ask any questions. What about you? Standing here pumping me when all the time—Say, let me get this straight: *Are* you the fellow who called here two weeks ago? Just how do you fit into this picture?"

Drake hesitated. The prospect of having to tell that story to people like this seemed full of difficulties. And yet—

She must know more. There must be a great deal of information about the month that the girl Selanie and her father had spent in the district. One thing was sure—Drake smiled grimly—if any more facts were available, this woman would have them.

Hesitation ended. He made his explanation, but finished a little uncertainly: "So you see, I'm a man who is—well—in search of his memory. Maybe I was knocked over the head, although there's no lump. Then again, maybe I was doped. *Something* happened to me. You say I went up there. Did I come back? Or what did I do? What—"

He stopped with a jump, for, without so much as a warning, the woman parted her lips, and let out a bellow:

"*Jimmy!*" she yelled in an ear-splitting voice, "JIMMY! C'M'ERE!"

"Yeah, mom!" came a boy's voice from inside the house.

Drake stared blankly as an uncombed twelve-year-old with a sharp, eager face catapulted from a screen door, that banged after him. He listened still with only partial comprehension as the mother explained to the boy that "this man was hit over the head by those people in the trailer, and he lost his memory, and he'd like you to tell him what you saw."

The woman turned to Drake. "Jimmy," she said proudly, "never trusted those folk. He was sure they were Nazis or something, and so he kept a sharp eye on them. He saw you go up there, and everything that happened right up to the time the trailer left."

She finished: "The reason he can tell you in such detail exactly what you did is that he could see everything through the windows, and besides he went inside once when they weren't around and looked the whole place over—just to make sure, of course, that they weren't pulling something."

Drake nodded, suppressing his cynicism. It was probably as good a reason as any for snooping—in this case, lucky for him.

The thought ended, as Jimmy's shrill voice projected into the gathering twilight—

The afternoon was hot, and Drake, after pausing to inquire of the woman in the first house as to where the father and daughter lived, walked slowly toward the grove of trees she had indicated.

Behind him, the train hooted twice, and then began to chuff. Drake suppressed a startled impulse to run back and get on. He realized that he couldn't have made it, anyway. Besides—

A man didn't give up the hope of fortune as easily as that. His pace quickened. By heaven, when he thought of that pen and that drinking cup—

He couldn't see the trailer in the grove until he turned into the initial shady patch of trees. When he saw it, he stopped short.

It was much bigger than he had conceived it. It was as long as a small freight car—and as big—curiously streamlined.

And no one answered his knock.

He thought tensely: She ran this way. She must be inside. Uncertain, he walked around the monster on wheels.

There was a line of windows above the level of his eyes that made a complete circuit of the trailer. He could see a gleamy ceiling and the upper part of what looked like finely paneled walls. There were three rooms, and the only other entrance led into the cab of the truck, to which the trailer was attached.

Back before the first entrance, Drake listened intently for sounds. But again there was nothing—nothing except a thin wind that blew gently through the upper reaches of the trees. Far away, the train whistled plaintively.

He tried the latch, and the door opened so easily that his hesitation ended. Deliberately, he pushed it ajar, and stood there staring into the middle room of the three.

Luxury shone at his startled gaze. The floor was a marvel, a darkly gleaming, gemlike design. The walls toned in with an amazingly rich-looking, though quiet, panel effect. There was a couch just across from the door, two chairs, three cabinets and several intricately carved shelves with fine-looking objects standing on them.

The first thing Drake saw, as he climbed in, was the girl's basket standing against the wall just to the left of the door.

The sight stopped him short. He sat in the doorway, then, his legs dangling toward the ground. His nervousness yielded to the continuing silence, and he began with a gathering curiosity to examine the contents of the basket.

There were about a dozen of the magic pens, at least three dozen of the folding, self-filling cups, a dozen, roundish black objects that refused to respond to his handling—and three pairs of pince-nez.

Each pair had a tiny, transparent wheel attached to the side of the right lens; and they simply lay there. They seemed to have no cases; there seemed to be no fear that they would break. The pair he tried on fitted snugly over his nose, and for a moment he actually thought they fitted his eyes.

Then he noticed the difference. Everything

was nearer—the room, his hand—not magnified or blurred, but it was as if he was staring through mildly powered field glasses.

There was no strain on his eyes; and, after a moment, he grew conscious again of the little wheel. It turned—quite easily.

Instantly, things were nearer, the field-glass effect twice as strong. Trembling a little, he began to turn the wheel, first one way, then the other.

A few seconds only were needed to verify the remarkable reality. He had on a pair of pince-nez with adjustable lens, an incredible combination telescope-microscope—superglasses.

Blankly, Drake returned the marvelous things to the basket, and, with abrupt decision, climbed into the trailer, and moved toward the entrance of the back room.

His intention was to peer in only. But that first look showed the entire wall fitted with shelves, each neatly loaded with a variety of small goods.

Utterly curious, Drake picked up what looked like a camera. It was fine little affair. He was peering into the lens when his fingers pressed something that gave. There was a click. Instantly, a glistening card came out of a slit in the back.

The picture was the upper part of a man's face. It had remarkable depth and an amazing natural color effect. It was the intent expression in the brown eyes that momentarily made the features strange, unfamiliar. Then he recognized that he was looking at himself. His picture, instantly developed—

It was all he needed. Chilled in spite of himself, Drake stuffed the picture in his pocket, set the instrument down—and, trembling, climbed out of the trailer, and walked off down the road toward the village.

"—and then," said Jimmy, "a minute later you came back, and climbed in and shut the door and went into the back room. You came back so fast that you nearly saw me; I thought you'd gone. And then—"

The trailer door opened. A girl's voice said something urgent that Drake didn't catch. The next instant, a man answered with a grunt. The door closed; and there was moving and breathing in the center room.

Crouching, Drake drew back against the left wall—

"—and that's all, mister," Jimmy finished. "I thought there was going to be trouble then. And I hiked for home to tell mom."

"You mean," Drake protested, "I was foolish enough to come back, just in time to get myself caught, and I didn't dare show myself?"

The boy shrugged. "You were pressing up against the partition—that's all I could see."

"And they didn't look in that room while you were watching?"

Jimmy hesitated. "Well," he began finally in a curious, defensive tone, "what happened then was kind of queer. You see, I looked back when I'd gone about a hundred yards—and the trailer and truck wasn't there no more."

"Wasn't there!" Drake spoke slowly. He had a sense of unreality. "You mean, they started up the truck engine, and drove to Piffer's Road, and so on down to the highway?"

The boy shook his head stubbornly. "Folks is always tryin' to trip me up on that. But I know what I saw and heard. There weren't no sound of an engine. They just was gone suddenly, that's all."

Drake felt an eerie chill along his spine. "And I was aboard?" he asked.

"You were aboard," said Jimmy.

The spasm of silence that followed was broken by the woman saying loudly: "All right, Jimmy, you can go and play."

She turned back to Drake: "Do you know what I think?" she said.

With an effort, Drake roused himself. It wasn't that he had been thinking. Actually, there was a blankness in his mind that—

"What?" he said.

"They're working a racket, the whole bunch of them together. The story about her father making the stuff. I can't understand how we fell for that. He just spent his time going around the district buying up old metal.

"Mind you"—the admission came almost reluctantly—"they've got some wonderful things. The government isn't kidding when it says that after this war we're going to live like kings and queens. But there's the rub. So far, these people have only got hold of a few hundred pieces altogether. What they do is sell them in one district, then steal everything back, and resell in another."

In spite of his intense self-absorption, Drake stared at her. He had run across the peculiar logic of fuzzy-minded people before, but it always shocked him when facts were so brazenly ignored in order that a crackpot theory might hold water. He said:

"I don't see where the profit comes in. What about the dollar you got back for each item that was stolen?"

"Oh!" said the woman. Her face lengthened, then she looked startled, and then, as she grasped how absolutely her pet idea was wrecked, an angry flush suffused her wind and sun-tanned face.

"Some publicity scheme maybe!" she snapped.

It struck Drake that it was time to terminate the interview. He said hastily: "Is anybody you know going into Inchney tonight? I'd like a ride if I could get it."

The change of subject did its work. The high color faded from the woman's cheeks. She said thoughtfully:

"Nope, no one I know of. But don't worry. Just get on the highway, and you'll get a lift—"

The second car picked him up. He sat in the hotel, as darkness fell, thinking:

"A girl and her father with a carload of the finest manufactured goods in the world. She sells them as souvenirs, one to a person. He buys old metal. And then, as added insanity, an old man goes around buying up the goods sold"—he thought of Kellie's pen—"or breaking them."

Finally, there was the curious amnesia of a fountain pen salesman, named Drake. It—

Somewhere behind Drake, a man's voice cried out in anguish: "Oh, look what you've done now. You're broken it."

A quiet, mature, resonant voice answered: "I beg your pardon. You paid a dollar for it, you say? I shall pay for the loss, naturally. Here—and you have my regrets."

In the silence that followed, Drake stood up and turned. He saw a tall, splendid-looking man with gray hair, in the act of rising from beside a younger chap, who was staring at the two pieces of a broken pen in his fingers.

The old man headed for the revolving door leading to the street, but it was Drake who got there first, Drake who said quietly but curtly:

"One minute, please. I want an explanation of what happened to me after I got into the trailer of the girl, Selanie, and her father. And I think you're the man to give it to me. I—"

He stopped. He was staring into eyes that were like pools of gray fire, eyes that seemed literally to tear into his face, and to peer with undiminished intensity at the inside of his brain. Drake had time for a brief, startled memory of what Kellie had said about the way this man had outfaced them on the train with one deadly look—and then it was too late for further thought.

With an utterly, unoldmanish, a tigerish speed, the other stepped forward, and caught Drake's wrist. There was the feel of metal in that touch, metal that sent a tingling glow along Drake's arm, as the old man said in a low, compelling voice:

"This way—to my car."

Barely, Drake remembered getting into a long, gleamy-hooded car. The rest was darkness—mental—physical—

He was lying on his back on a hard floor. Drake opened his eyes, and for a blank moment stared at a domed ceiling two hundred feet above him. The ceiling was at least three hundred feet wide, and nearly a quarter of it was window, through which a gray-white mist of light showed, as if an invisible sun was trying hard to penetrate a thin but persistent fog.

The wide strip of window ran along the center of the ceiling straight on into the distance. It—

Into the distance!

With a gasp, Drake jerked erect. For a moment then his mind threatened to ooze out of his head.

There was no end to that corridor.

It stretched in either direction until it became a blur of gray marble and gray light. There was a balcony and a gallery and a second gallery. each floor had its own side corridor set off by a railing; and there were countless shining doors and, every little while, a branch corridor, each suggesting other vast reaches of that visibly monstrous building.

Very slowly, the first enormous shock over, Drake climbed to his feet. Memory of the old man—and what had gone before—was a weight in his mind. He thought darkly: "He got me into his car—and drove me here. Only—"

Only, on all the wide surface of the Earth, no such building existed.

A chill percolated up his spine. It cost him a distinct effort to walk toward the nearest of the long line of tall, carved doors, and pull it open.

What he expected, he couldn't have told. But his first reaction was—disappointment.

It was an office, a large room with plain walls. There were some fine-looking cabinets along one wall. A great desk occupied the corner facing the door. Some chairs and two comfortable-looking settees and another, more ornate door completed the picture.

No one was in the room. The desk looked spic and span, dustless. And lifeless.

The second door was locked, or else the latch was too complicated.

Out in the corridor again, Drake grew conscious of the intense silence. His shoes clicked with an empty sound—and door after door yielded the same office-furnished but uninhabited interior.

An hour passed by his watch. And then another half-hour. And then—he saw the door in the distance.

At first it was only a brightness. It took on glittering contours, became an enormous glass affair set in a framework of multitinted windows.

The door was easily fifty feet in height; and when he peered through its transparent panes, he could see great white steps leading down into a mist that thickened after about twenty feet, so that the lower steps were not visible.

Drake stared uneasily. There was something

wrong here. That mist, obscuring everything, persisting for hours, clinging darkly—

He shook himself. Probably, there was water down there at the foot of the steps, warmish water subjected to a constant stream of cold air, and thick fog formed—

For a moment, he pictured that in his mind—a building ten miles long standing beside a lake, and buried forever in gray mists.

"Get out of here," he thought sharply, "get out!"

The latch of the door was at a normal height. But it seemed impossible that he would be able to maneuver the gigantic structure with such a comparatively tiny leverage. It—

It opened lightly, gently, like a superbly balanced machine. Drake stepped out into the pressing fog and began, swiftly at first, and then with a developing caution, to go down the steps. No use landing up in a pool of deep water.

The hundredth step was the last; and there was no water. There was nothing except mists, no foundations for the steps, no ground—nothing!

On hands and knees, dizzy with a sudden vertigo, Drake crawled back up the steps. He was so weak that inches only seemed to recede behind him. The nightmarish feeling came that the steps were going to crumble under him, now that he had discovered that their base was—nothing.

A second, greater fear came that the door would not open from the outside, and cut him off here on the edge of eternity forever.

But it did open. It took all the strength of his weakened body. He lay on the floor inside, and after a while the awful wonder came to his mind: What did a girl called Selanie, dispensing marvelous gadgets on a train, have to do with this?

There seemed no answer.

His funk yielded to the sense of safety produced by the passing minutes. He stood up, ashamed of his terror, and his mind grooving to a purpose.

The fantastic place must be explored from cellar to roof. Somewhere, there would be a cache of the cups that created their own water. And perhaps also there would be food. Soon, he would have to eat and drink.

First, to one of the offices. Examine every cabinet, break open the desk drawers, search—

It wasn't necessary to break anything. The drawers opened at the slightest tug. The cabinet doors were unlocked.

Inside were journals, ledgers, curious-looking files. Absorbed, Drake glanced blurrily through several that he had spread out on the great desk, blurrily because his hands were shaking, and his brain couldn't penetrate for a second at a time.

Finally, with an effort of will, he pushed everything aside but one of the journals. This he opened at random, and read the words printed there:

SYNOPSIS OF REPORT OF POSSESSOR KINGSTON CRAIG IN THE MATTER OF THE EMPIRE OF LYCEUS II

A. D. 27,346—27,378

Frowning, Drake stared at the date; then he read on:

The normal history of the period is a tale of cunning usurpation of power by a ruthless ruler. A careful study of the man revealed an unnatural urge to protect himself at the expense of others.

TEMPORARY SOLUTION: A warning to the Emperor, who nearly collapsed when he realized that he was confronted by a Possessor. His instinct for self-preservation impelled him to give guarantees as to future conduct.

COMMENT: This solution produced a probability world Type 5, and must be considered temporary because of the very involved permanent work that Professor Terran Link is doing on the fringes of the entire two hundred seventy-third century.

CONCLUSION: Returned to the Palace of Immortality after an absence of three days.

Drake sat there, stiffly at first, then he leaned back in his chair; but the same blank impression remained in his mind. Quite simply, there was nothing to think.

At last, he turned a leaf, and read:

SYNOPSIS OF REPORT OF POSSESSOR KINGSTON CRAIG

This is the case of Lairn Graynon, Police Inspector, 900th Sector Station, New York City, who on July 7, 2830 A. D. was falsely convicted of accepting bribes, and de-energized.

SOLUTION: Obtained the retirement of Inspector Graynon two months before the date given in the charge. He retired to his farm, and henceforth exerted the very minimum of influence on the larger scene of existence. He lived in this probability world of his own until his death in 2874, and thus provided an almost perfect 290A.

CONCLUSION: Returned to the Palace of Immortality after one hour.

There were more entries, hundreds—thousands altogether in the several journals. Each one was a "REPORT OF POSSESSOR KINGSTON CRAIG," and always he returned to the "Palace of Immortality" after so many days, or hours or—weeks. Once it was three months, and that was an obscure, impersonal affair that dealt with "the establishment of the time of demarcation between the ninety-eighth and ninety-ninth centuries—" and involved "the resurrection into active, personal probability worlds of their own of three murdered men, named—"

The sharpening pangs of thirst and hunger brought to Drake a picture of himself sitting in

this immense and terrible building, reading the fanciful scrawlings of a man who *must* be mad.

It struck him that the seemingly sourceless light of the room was growing dimmer. The light must come in some way from outside and—

Out in the vast, empty corridor, he realized the truth. The mists above the ceiling window were graying, darkening. Night was falling.

He tried not to think of that—of being alone in this tomblike building, watching the gloom creep over the gray marble—wondering what things might come out of hiding once the darkness grew impenetrable and—

"Stop it, you fool!" Drake said aloud, savagely.

His voice sounded hollow against the silence, and scared a thought into his shuddering brain:

There must be a place here where these—Possessors—had lived. This floor was all offices, but the next—stairway—find a stairway. He had seen none on the main corridor, so—

It was as simple as that. Fifty feet along the first side corridor was a broad staircase. Drake bounded up the steps and tried the first door he came to.

The door opened into the living room of a magnificent apartment. There were seven rooms, including a kitchen that gleamed in the dimming light, and the built-in cupboards of which were packed with transparent containers; the contents were foods both familiar and strange.

Drake felt without emotion, not even a tremor or surprise touched him as he manipulated a tiny lever at the top of a can of pears, and the fruit simply spilled out onto the table—although the bottle had not opened in any way.

He saw to it that he had a dish for the next attempt; that was all. Later, after he had eaten, he searched for light switches. But it was becoming too dark to see.

The main bedroom had a canopied bed that loomed in the darkness, and there were pajamas in a drawer. Lying between the cool sheets, his body heavy with approaching sleep, Drake thought vaguely:

That girl Selanie and her fear of the old man—why had she been afraid? And what *could* have happened in the trailer that had irrevocably precipitated Ralph Carson Drake into—this?

Drake slept with the thought still in his mind, uneasily—

The light was far away at first. It came nearer, grew brighter, and at first it was like any awakening. Then, just as Drake opened his eyes, memory flooded his mind.

He was lying, he saw tensely, on his left side; and it was broad daylight. From the corners of his eyes he could see, above him, the silvery-blue canopy of the bed, and beyond it, far above, the high ceiling.

Realization came that in the shadows of the previous evening he had scarcely noticed how big and roomy and—luxurious—his quarters were.

There were thick, shining rugs and paneled walls and rose-colored furniture that glowed with costly beauty. The bed was an oversize four-poster affair and—

Drake's thought suffered a dreadful pause because, in turning his head away from the left part of the room toward the right, his gaze fell for the first time on the other half of the bed.

A young woman lay there, fast asleep.

She had dark-brown hair, a snow-white throat, and, even in repose, her face looked fine and intelligent. She appeared to be about thirty years old.

Drake's examination got no further. Like a thief in the night, he slid from under the quilt. He reached the floor and crouched there holding his breath in a desperate dismay because—

The steady breathing from the bed had stopped.

There was the sound of a woman sighing, and finally—doom!

"My dear," said a rich contralto voice, lazily, "what on earth are you doing on the floor?"

There was movement on the bed, and Drake cringed in awful anticipation of the scream that would greet the discovery that he was not *the* my dear.

But nothing happened. The lovely head came over the edge of the bed; gray eyes stared at him tranquilly. The young woman seemed to have forgotten her first question, for she said:

"Darling, are you scheduled to go to Earth today?"

That got him. The question itself was so stupendous that his personal relation to—everything—seemed secondary. Besides—dim understanding was coming.

This was one of those worlds of probability that he had read about in the journals of Possessor Kingston Craig. Here simply and tremendously was something that *could* happen to Ralph Drake. And somewhere behind the scenes someone was making it happen.

All because he had gone in search of his memory.

Drake stood up. He was perspiring, his heart was beating like a trip hammer, his knees trembled and there wasn't a calm thought in his head. But he stood up, and he said:

"Yes, I'm going to Earth."

It gave him purpose, he thought tensely, reason to get out of here as fast as he possibly could and—

He was heading for the chair on which were his clothes when the import of his own words provided the second and greater shock to his badly staggered nerves.

Going to Earth! He felt his brain sag before the crushing weight of a fact that transcended every reality of his existence. Going to Earth—from where?

The answer was a crazy thing that sighed at last wearily through his mind: From the Palace of Immortality, of course, the palace in the mists, where the Possessors lived.

He reached the bathroom. The night before, he had discovered in its darkening interior a transparent jar of salve, the label of which said: BEARD REMOVER—RUB ON, THEN WASH OFF.

It took half a minute—the rest five minutes longer.

He came out of the bathroom, fully dressed. His mind was like a stone in his head, and like a stone sinking through water he started for the door near the bed.

"Darling!"

"Yes!" Cold and stiff, Drake turned. In a spasm of relief, he saw that she was not looking at him. Instead she had one of the magic pens and was frowning over some figures in a big ledger. Without looking up, she said:

"Our time-relation to each other is becoming worse. You'll have to stay more at the palace, reversing your age, while I go to Earth and add a few years to mine. Will you make the arrangements for that, dear?"

"Yes," said Drake, "yes!"

There was nothing else. He walked into the little hallway, then into the living room; and then—out in the corridor at last, he leaned against the cool, smooth marble wall, thinking hopelessly:

Reverse his age! So that was what this incredible building did! Every day here you were a day younger, and it was necessary to—go—to Earth to strike a balance.

The shock grew. And there was no longer any question: What had happened to him on the trailer was so important that a gigantic superhuman organization was striving with every ounce of power to prevent him from learning the truth.

Beyond all doubt, today he would really have to find out what all this was about, explore every

floor, try to locate some kind of central office and—

He was relaxing slowly, withdrawing out of that intense inward concentration of his mind when, for the first time, awareness came of—sounds. Voices, movements, people—below.

Even as he leaped for the balcony balustrade, the shattering realization came to Drake that he should have known it. The woman there in the bed—where she hadn't been—had implied a world complete in every detail of life.

Shock came, anyway. With frantic eyes, he stared down at the great main corridor of the building, along the silent, deserted reaches of which he had wandered for so many hours the day before.

Silent and deserted no longer. Men and women swarmed along it in a steady stream. It was like a city street, with people moving in both directions, all in a hurry, all bent on some private errand, all—

"Hello, Drake!" said a young man's voice behind him.

Curiously, Drake had no emotion left for that.

He turned slowly, like a tired man. The stranger who stood there regarding him was tall and well-proportioned. He had dark hair and a full, strong face. He wore a shapely one-piece suit, pleasingly form-fitting above the waist; the trouser part puffed out like breeches. He was smiling in a friendly, quizzical fashion. He said finally, coolly:

"So you'd like to know what it's all about. Don't worry, you will. But first try on this glove, and come with me. My name is Price, by the way."

Drake stared at the extended glove. "What—" he began blankly.

He stopped. His mind narrowed around the conviction that he was being rushed along too fast for understanding. This man waiting for him here at the door and—

Drake braced himself consciously. Take it easy, he thought sharply.

The overwhelmingly important thing was that *they* were out in the open at last. But—this glove!

He accepted the thing, frowning. It was for his right hand; and it fitted perfectly. It was light in weight, flexible but it seemed unnaturally thick. The outer surface had a faint metallic sheen.

"Just grab his right shoulder with that glove from behind," Price was saying. "Press below the collarbone with the points of your fingers, press hard—I'll give you an illustration later. Any questions?"

"*Any questions!*" The explosion of sound hurt Drake's throat. He swallowed hard. Before he could speak, Price said:

"I'll tell you as we go along. Be careful on those stairs."

Drake caught his mind and body into a tight unit. He said roughly: "What's all this nonsense about grabbing somebody by the shoulder? Why—"

He stopped hopelessly. It was all wrong, the way this was going. He was like a blind man being given fragments of information about a world he couldn't see. There was no beginning, no coherence, nothing but these blurry half-facts.

He'd have to get back to fundamentals. He, Drake, was a man in search of his memory. Something had happened to him aboard a trailer, and everything else had followed as the night the day. Keep that in mind and—

"Damn you!" Drake said out of the anguish of his bewilderment. "Damn you, Price, I want to know what this is all about."

"Don't get excited." They were down the steps now, heading along the side corridor to the great main hallway. Price half turned as he spoke. "I know just how you feel, Drake, but you must see that your brain can't be overloaded in one sustained assault of information. Yesterday, you found this place deserted. Well, that wasn't exactly yesterday."

He shrugged. "You see how it is. That was today in the alternative world to this one. That is how this building will be forever if you don't do what we want. We had to show you that. And now, for Heaven's sake, don't ask me to explain the science and theory of time-probability."

"Look," said Drake desperately, "let's forget everything else, and concentrate on one fact. You want me to do something with this glove. What? Where? When? Why? I assure you I'm feeling quite reasonable. I—"

His voice faded. With a start, he grew aware that Price and he were in the main corridor, heading straight for the great doorway, which led to the steps and the misty nothingness beyond them.

The clammy feeling that came then brought a genuine chill to his whole body. Drake said sharply:

"Where are you going?"

"I'm taking you to Earth."

"Out that door?"

Drake stopped short. He wasn't sure just what he felt, but his voice sounded preternaturally sharp and tense in his ears.

He saw that Price had stopped. The man was looking at him steadily. Price said earnestly:

"There's nothing strange about any of this, really. The Palace of Immortality was built in an eddy of time, the only known Reverse, or Immortality, Drift in the Earth Time Stream. It has made the work of the Possessors possible, a good work as you know from your reading in Possessor Kingston Craig's office—"

His voice went on, explaining, persuading; but it was curiously hard for Drake to concentrate on

his words. That mist bothered him. Go down those steps with anyone— Never!

It was the word, Possessors, that brought Drake's mind and body back into active operation. He had seen and heard the word so often that, for all these long minutes, he had forgotten that he knew nothing.

He heard himself asking the question, his voice shrill and demanding: "But who are the Possessors? What do they possess?"

The man looked at him, dark eyes thoughtful. "They possess," he said finally, "the most unique ability ever to distinguish men and women from their fellows. They can go through time at will.

"There are," Price went on, "about three thousand of them. They were all born over a period of five hundred years beginning in the twentieth century; the strangest thing of all is that every one of them originated in a single, small district of the United States, around the towns of Kissling, Inchney and particularly in an infinitesimal farming community called Piffer's Road."

"But that," Drake said through dry lips, "is where I was born." His eyes widened. "And that's where the trailer—"

Price seemed not to have heard. "Physically," he said, "the Possessors are also unique. Every one of them has the organs of his or her body the opposite to that of a normal human being. That is, the heart is on the right side and—"

"But I'm like that," Drake gasped. His mind was taking great leaps, pounding at the bony walls of his head, trying to get out. "That's why the draft board rejected me. They said they couldn't take the risk of my getting wounded, because the surgeon wouldn't know my case history. They—"

Behind Drake, footsteps clicked briskly. He turned automatically, and stared vaguely at the woman in a fluffy gorgeous dressing gown who was walking toward them.

She smiled as she saw him, the smile he had already seen in the bedroom. She said in her rich voice, as she came up:

"Poor fellow! He looks positively ill. Well, I did my best to make the shock easy for him. I gave him as much information as I could without letting on that I knew everything."

Price said: "Oh, he's all right." He turned to Drake. There was a faint smile on his face, as if he was appreciating the situation to the full. "Drake, I want you to meet your wife, formerly Selanie Johns, who will now tell you what happened to you when you climbed aboard her father's trailer at Piffer's Road. Go ahead, Selanie."

Drake stood there. He felt like a clod of wood, empty of emotion and of thought. It was only slowly that he grew aware of her voice telling the story of the trailer.

Standing there in the back room of the trailer, Drake wondered what might happen even now if he should be caught red-handed before he could act. He heard the man in the center room say:

"We'll head for the fourteenth century. They don't dare do much monkeying around in this millennium."

He chuckled grimly: "You'll notice that it was an old man they sent, and only one of them at that. Somebody had to go out and spend thirty or forty years growing old, because old men have so much less influence on an environment than young.

"But we'd better waste no time. Give me those transformer points, and go into the cab and start the atomic transformers."

It was the moment Drake had been waiting for. He stepped out softly, flexing his gloved right hand. He saw the man standing, facing in the direction of the door that led to the front room and the engine cab beyond it.

From the back, the man looked of stocky build, and about forty-five years of age. In his hands, clutched tight, he held two transparent cones that glowed with a dull light.

"All right," he called gruffly as Drake stepped up behind him. "We're moving—and hereafter, Selanie, don't be so frightened. The Possessors are through, damn them. I'm sure our sale of that stuff, and the removal of so much metal has interfered with the electronic balances that made their existence possible."

His voice shook. "When I think of the almighty sacrilege of that outfit, acting like God, daring to use their powers to change the natural course of existence instead of, as I suggested, making it a means of historical research and—"

His voice collapsed into a startled grunt, as Drake grabbed his shoulder, and pressed hard below the collarbone—

"—just a minute!" Drake's voice cut piercingly across the woman's story. "You talk as if I had a glove like this"—he raised his right hand with its faintly gleaming glove, that Price had given him—"and there's also a suggestion in your words

that I know everything about the Possessors and the Palace of Immortality. You're perfectly aware that I knew nothing at that time.

"I had just come off a train, where a fountain pen had been brought to my attention by a salesman called Bill Kellie. I—"

He saw that the woman was looking at him gravely. She said: "I'm sure you will understand in a few minutes. Everything that we've done has been designed to lead up this moment. Only a few hours of existence remains to this probability world—*this* one, where Mr. Price and you and I are standing; there is a strange balance of forces involved, and, paradoxical as it may seem, we are actually working against time."

Drake stared at her, startled by her tone, as she said urgently: "Let me go on, please—"

The stocky man stood utterly still, like a man who has been stunned by an intolerable blow. And then, as Drake let go his shoulder, he turned slowly, and his gaze fastened sickly, not on Drake's face, but on the glove he wore.

"A Destroyer glove!" he whispered; then more wildly: "But how? The repellors are on my special invention that prevents a trained Possessor coming near me!"

He looked for the first time at Drake's face. "How did you do it? I—"

"Father!" It was the girl's voice, clear and startled, from the engine cab. Her voice came nearer. "Father, we've stopped at about 1650 A. D. What's happened? I thought—"

She paused in the doorway like a startled bird, a tall, slim girl of around nineteen years—looking suddenly older, grayer, as she saw Drake.

"You . . . were on . . . the . . . train!" she said.

Her gaze fluttered to her father. She gasped: "Dad, he hasn't—"

The stocky man nodded hopelessly. "He's destroyed my power to go through time. Wherever we are in time and space, we're *there*. Not that that matters. The thing is—we've failed. The Possessors live on to do their work."

The girl said nothing; the two of them seemed totally to have forgotten Drake. The man caught her arm, said hoarsely:

"Don't you understand—we've failed."

Still she was silent. Her face had a bleached quality when she answered finally:

"Father, this is the hardest thing I've ever said, but—I'm glad. *They're* in the right; *you're* wrong. They're trying to do something about the terrible mistakes of Man and Nature. They've made a marvelous science of their great gift, and they use it like beneficient gods.

"It was easy enough for you to convince me when I was a child, but for years now my doubts have been gathering. I stayed with you through loyalty. I'm sorry, father."

She turned. There were tears in her eyes, as she opened the outer door, and jumped to the green ground below.

Drake stood for a moment, fascinated by the panorama of emotions on the man's face, first a quiver of self-pity, then a gathering over-all expression of obstinacy. A spoiled child couldn't have provided a more enlightening picture of frustrated egoism.

One long look Drake took; and then he, too, went to the door. There was the girl to make friends with, and an early western American world to explore and wonder at.

They were thrown into each other's company by the stubborn silence into which the older man retreated. They walked often along the green, uninhabited valley, Drake and the girl.

Once, a group of Indians on foot confronted the two of them far from the trailer; to Drake it was a question as to who was the more startled. It was Selanie who had her atomic gun out first.

She fired at a stone. It puffed out of sight in a flare of brilliance; and no more Indians ever came that way.

In a way, it was an idyllic life; and love came as easily as the winds that blew mournfully across that lonely land. Came especially easily because he *knew*—and persisted against her early coldness.

After that, they talked more urgently of persuading a self-willed man to train one or the other, or both, of them, how to use their innate ability to travel in time. Drake knew that the man would give in eventually from sheer loneliness, but it took a year longer.

Drake's mind drew slowly back into the great domed palace, and consciousness came that the woman's voice had stopped. He stared at her, then at Price. He said finally, puzzled:

"Is that all? Your . . . father—" He looked at the woman, stumbling over the relationship. It was immensely difficult to connect this mature woman with—

He pressed on: "You mean, your father was opposed to the work done by the Possessors and—But how did he expect to eliminate them? I don't get it."

It was Price who answered: "Mr. Johns' plan was to divert the local activity that had helped to create the Possessors. We know that foods definitely played a vital part, but just what combination of foods and other habits was the root cause, we have never learned.

"Mr. Johns thought by having people drink from his cups, use his other food devices and general articles, he would break the general pattern of existence away from what it would normally have followed.

"His gathering of metal was also planned. Metal has a very strong influence on the great Time Stream. Its sudden removal from one time to another can upset entire worlds of probability.

"As for us, we could not interfere, except as you saw. The world prior to the twenty-fifth century is one age where no work will ever be done by the Possessors. It must solve its own problems. Even you, one of the first to possess the gift of time travel, though you would never of yourself have learned the method, had to be allowed to move toward your destiny—almost naturally."

"Look," said Drake, "either I'm crazy or you are. I'm willing to accept everything—the existence of this Palace of Immortality, the fact that she's my wife in some future date, and that I've sort of dropped in on her before *I* married her, but *after* she married me.

"I'll accept all that, I say but—you gave me this glove a little while ago, and you said you wanted me to do something with it, and a few minutes ago my . . . wife . . . said that this world was in hourly danger of being wiped out. Is there something else that you haven't told me about? And why that spell of amnesia?"

Price cut him off: "Your part in all this is really very simple. As a salesman of the Quik-Rite Co., you followed Selanie, who was then nineteen years old, to a trailer at Piffer's Road occupied by her father and herself.

"When you got there, she wasn't to be found, nor was anyone else, so you started back to the village to make inquiries. On the way, however, you were picked up by Possessor Drail McMahon and transported one week ahead in time, and all relevant memory was drained from you. You wakened in the hospital and—"

"Just a minute!" Drake protested. "My . . . wife . . . has just told me what else I did. I knew that before, of course. There was an eyewitness, a boy named Jimmy, who saw me go back to the trailer, and that I was on it when it disappeared."

"Let me tell this," Price said coolly. "From the hospital, you set out to find what had happened to you. You did find out, and then you were transported here by another Possessor, and here you are."

Drake looked at the man, then at the woman; she nodded, and the first flame was already burning in his mind as Price continued:

"In a few moments, I shall take you to Earth to the vicinity of the trailer of Peter Johns and his daughter. You will go aboard, conceal yourself in the back room and at the moment that Selanie has described to you, you will come out and grab her father by the shoulder with the glove.

"The glove produces energy that will subtly change the potential of his nerve force; it will not harm him—nor will we afterward. As a matter of fact, he will be used as a research agent by us—afterward."

Price finished simply: "You can see that this action requires free will, and that we had to do everything as we have, to make sure that you would make no mistake."

Drake said: "I can see a lot of things."

He felt himself completely calm except for the way his soul was expanding with the tremendousness of what was here. Slowly, he walked over to the woman, took her hand and gazed steadily into her eyes. He said:

"This is you—when?"

"Fifty years from now in your life."

"And where am I? Where is your husband?"

"You went to Earth, into the future. You had to be out of the way. The same body cannot be in the same space. And that reminds me; that is the one hold we have on you."

"How?"

"If instead of entering the trailer, you walked off down the road to resume your life, in one week you would reach the time where your earlier self was in the hospital. You would vanish, disintegrate."

Drake said: "I like your looks. I don't think I'm going to muff it."

Looking back, he could see her, as he walked down the steps into the thickening folds of mist. She was standing with her face pressed against the glass of the door.

The mists swallowed her.

His memory search was over. He was about to live the events he thought he had forgotten.

THE END.

NOTHING BUT GINGERBREAD LEFT

By Henry Kuttner

● A story of a rhyme, of perfect rhythm, and the complete disruption of military machinery by a nursery jingle that could not be forgotten.

Illustrated by M. Isip

The only way to make people believe this story is to write it in German. And there's no point in doing that, for the German-speaking world is already starting to worry about gingerbread left.

I speak figuratively. It's safer. Very likely Rutherford, whose interests are equally divided between semantics and Basin Street, could create an English equivalent of gingerbread left, God forbid. As it is, the song, with its *reductio ad absurdum* of rhythm and sense, is meaningless in translation. Try translating Jabberwocky into German. So what?

The song, as Rutherford wrote it in German, had nothing to do with gingerbread, but, since the original is obviously unavailable, I'm substituting the closest thing to it that exists in English. It's lacking in that certain compelling perfection on which Rutherford worked for months, but it'll give you an idea.

We'll start, I suppose, with the night Rutherford threw a shoe at his son. He had reason. Phil Rutherford was in charge of semantics at the University, and he was battling a hangover and trying to correct papers at the same time. Physical disabilities had kept him out of the army, and he was brooding over that, wondering if he should gulp some more Sherman units of thiamin, and hating his students. The papers they had handed in were no good. For the most part, they smelled. Rutherford had an almost illicit love for words, and it distressed him to see them kicked around thus. As Humpty Dumpty had said, the question was which was to be the master.

Usually it wasn't the students. Jerry O'Brien had a good paper, though, and Rutherford went over it carefully, pencil in hand. The radio in the living room didn't bother him; the door was closed, anyhow. But, abruptly, the radio stopped.

"Hi," said Rutherford's thirteen-year-old son, poking his untidy head across the threshold. There was an ink smudge on the end of the youth's nose. "Hi, pop. Finished my homework. Can I go to the show?"

"It's too late," Rutherford said, glancing at his wrist watch. "Sorry. But you've an early class tomorrow."

"*Nom d'un plume,*" Bill murmured. He was discovering French.

"Out. I've got work to do. Go listen to the radio."

"They make with corn tonight. Oh, well—" Bill retreated, leaving the door ajar. From the other room came confused, muffled sounds. Rutherford returned to his work.

He became aware, presently, that Bill was repeating a monotonous, rhythmic string of phrases. Automatically Rutherford caught himself listening, straining to catch the words. When he did, they were meaningless—the familiar catch phrases of kids.

"Ibbety zibbety zibbety zam—"

It occurred to Rutherford that he had been hearing this for some time, the mystic doggerel formula for choosing sides—"and out goes *you!*" One of those things that stick in your mind rather irritatingly.

"Ibbety zibbety—" Bill kept chanting it in an absent-minded monotone, and Rutherford got up to close the door. It didn't quite stop. He could still hear just enough of the rhythmic noises to start his mind moving in a similar rhythm. Ibbety zibbety—the hell with it.

After a while Rutherford discovered that his lips were moving silently, and he shoved the papers back on his desk, muttering darkly. He was tired, that was it. And correcting exams required concentration. He was glad when the bell rang.

It was Jerry O'Brien, his honor student. Jerry was a tall, thin, dark boy with a passion for the same low-down music that attracted Rutherford. Now he came in grinning.

"Hi, prof," he greeted the older man. "I'm in. Just got my papers today."

"Swell. Sit down and tell me."

There wasn't much to tell, but it lasted quite a

while. Bill hung around, listening avidly. Rutherford swung to glare at his son.

"Lay off that ibbety-zibbety stuff, will you?"

"Huh? Oh, sure. I didn't know I was—"

"For days he's been at it," Rutherford said glumly. "I can hear it in my sleep."

"Shouldn't bother a semanticist."

"Papers. Suppose I'd been doing important precision work. I mean really important. A string of words like that gets inside your head and you can't get it out."

"Especially if you're under any strain, or if you're concentrating a lot. Distracts your attention, doesn't it?"

"It doesnt bother *me*," Bill said.

Rutherford grunted. "Wait'll you're older and really have to concentrate, with a mind like a fine-edged tool. Precision's important. Look what the Nazis have done with it."

"Huh?"

"Integration," Rutherford said absently. "Training for complete concentration. The Germans spent years building a machine—well, they make a fetish out of wire-edged alertness. Look at the stimulant drugs they give their raiding pilots. They've ruthlessly cut out all distractions that might interfere with *uber alles*."

Jerry O'Brien lit a pipe. "They are hard to distract. German morale's a funny thing. They're convinced they're supermen, and that there's no weakness in *them*. I suppose, psychologically speaking, it'd be a nice trick to convince them of personal weakness."

"Sure. How? Semantics?"

"I dunno how. Probably it can't be done, except by blitzes. Even then, bombs aren't really an argument. Blowing a man to bits won't necessarily convince his comrades that he's a weakling. Nope, it'd be necessary to make Achilles notice he had a heel."

"Ibbety zibbety," Bill muttered.

"Like that," O'Brien said. "Get some crazy tune going around a guy's skull, and he'll find it difficult to concentrate. I know I do, sometimes, whenever I go for a thing like the Hut-Sut song."

Rutherford said suddenly, "Remember the dancing manias of the middle ages?"

"Form of hysteria, wasn't it? People lined up in queues and jitterbugged till they dropped."

"Rhythmic nervous exaltation. It's never been satisfactorily explained. Life is based on rhythm —the whole universe is—but I won't go cosmic on you. Keep it low-down, to the Basin Street level. Why do people go nuts about some kinds of music? Why did the 'Marseillaise' start a revolution?"

"Well, why?"

"Lord knows." Rutherford shrugged. "But certain strings of phrases, not necessarily musical, which possess rhythm, rhyme, or alliteration, do stick with you. You simply can't get 'em out of your mind. And—" He stopped.

O'Brien looked at him. "What?"

"Imperfect semantics," Rutherford said slowly. "I wonder. Look, Jerry. Eventually we forget things like the Hut-Sut. We can thrust 'em out of our minds. But suppose you got a string of phrases you *couldn't* forget? The perverse factor would keep you from erasing it mentally—the very effort to do so would cancel itself. Hm-m-m. Suppose you're carefully warned not to mention Bill Fields' nose. You keep repeating that to yourself 'Don't mention the nose.' The words, eventually, fail to make sense. If you met Fields, you'd probably say, quite unconsciously, 'Hello, Mr. Nose.' See?"

"I think so. Like the story that if you meet a piebald horse, you'll fall heir to a fortune if you don't think about the horse's tail till you're past."

"Exactly." Rutherford looked pleased. "Get a perfect semantic formula and you can't forget it. And the perfect formula would have everything. It'd have rhythm, and just enough sense to start you wondering what it meant. It wouldn't necessarily mean anything, but—"

"Could such a formula be invented?"

"Yeah. Yeah. Combine language with mathematics and psychology, and something could be worked out. Could be, such a thing was accidentally written in the middle ages. What price the dance manias?"

"I don't think I'd like it." O'Brien grimaced. "Too much like hypnosis."

"If it is, it's self-hypnosis, and unconscious. That's the beauty of it. Just for the hell of it—draw up a chair." Rutherford reached for a pencil.

"Hey, pop," Bill said, "why not write it in German?"

Rutherford and O'Brien looked at each other, startled. Slowly a gleam of diabolic understanding grew in their eyes.

"German?" Rutherford murmured. "You majored in it, didn't you, Jerry?"

"Yeah. And you're no slouch at it, either. Yeah—we *could* write it in German, couldn't we? The Nazis must be getting plenty sick of the Horst Wessel song."

"Just for the . . . uh . . . fun of it," Rutherford said, "let's try. Rhythm first. Catchy rhythm, with a break to avoid monotony. We don't need a tune." He scribbled for a bit. "It's quite impossible, of course, and even if we did it, Washington probably wouldn't be interested."

"My uncle's a senator," O'Brien said blandly.

LEFT!
LEFT!
LEFT a wife and SEVenteen children in
STARVing condition with NOTHing but gingerbread LEFT
LEFT
LEFT a wife and SEVenteen children—

"Well, I might know something about it," said Senator O'Brien.

The officer stared at the envelope he had just opened. "So? A few weeks ago you gave me this, not to be opened till you gave the word. Now what?"

"You've read it."

"I've read it. So you've been annoying the Nazi prisoners in that Adirondack hotel. You've got 'em dizzy repeating some German song I can't make head nor tail out of."

"Naturally. You don't know German. Neither do I. But it seems to have worked on the Nazis."

"My private report says they're dancing and singing a lot of the time."

"Not dancing, exactly. Unconscious rhythmic reflexes. And they keep repeating the . . . er . . . semantic formula."

"Got a translation?"

"Sure, but it's meaningless in English. In German it has the necessary rhythm. I've already explained—"

"I know, senator, I know. But the War Department has no time for vague theories."

"I request simply that the formula be transmitted frequently on broadcasts to Germany. It may be hard on the announcers, but they'll get over it. So will the Nazis, but by that time their morale will be shot. Get the Allied radios to cooperate—"

"Do you really believe in this?"

The senator gulped. "As a matter of fact, no. But my nephew almost convinced me. He helped Professor Rutherford work out the formula."

"Argued you into it?"

"Not exactly. But he keeps going around muttering in German. So does Rutherford. Anyway—this can do no harm. And I'm backing it to the limit."

"But—" The officer peered at the formula in German. "What possible harm can it do for people to repeat a song? How can it help us—"

LEFT!
LEFT!
LEFT a wife and SEVenteen children in
STARVing condition with NOTHing but gingerbread LEFT
LEFT—

"*Aber,*" said Harben, "*aber, aber, aber!*"

"But me no buts," reported his superior officer, Eggerth. "The village must be searched completely. The High Command is quartering troops here tomorrow, on their way to the eastern front, and we must make sure there are no weapons hidden anywhere."

"*Aber* we search the village regularly."

"Then search it again," Eggerth ordered. "You know how those damned Poles are. Turn your

back for a minute and they've snatched a gun out of thin air. We want no bad reports going back to the Führer. Now get out; I must finish *my* report, and it must be accurate." He thumbed through a sheaf of notes. "How many cows, how many sheep, the harvest possibilities—*ach*. Go away and let me concentrate. Search carefully."

"Heil," Harben said glumly, and turned. On the way out his feet found a familiar rhythm. He started to mutter something.

"Captain Harben!"

Harben stopped.

"What the devil are you saying?"

"Oh—the men have a new marching song. Nonsense, but it's catchy. It is excellent to march to."

"What is it?"

Harben made a deprecating gesture. "Meaningless. It goes 'Left, left, left a wife and seventeen children—' "

Eggerth stopped him. "That. I've heard it. *Unsinn. Heil.*"

Heiling, Harben went away, his lips moving. Eggerth bent over the report, squinting in the bad light. Ten head of cattle, scarcely worth slaughtering for their meat, but the cows giving little milk. . . . Hm-m-m. Grain—the situation was bad there, too. How the Poles managed to eat at all—they'd be glad enough to have gingerbread, Eggerth thought. For that matter, gingerbread was nutritious, wasn't it? Why were they in starving condition if there was still gingerbread? Maybe there wasn't *much*—

Still, why nothing *but* gingerbread? Could it be, perhaps, that the family disliked it so much they ate up everything else first? A singularly shortsighted group. Possibly their ration cards allowed them nothing but gingerbread *LEFT*

LEFT

LEFT a wife and SEVenteen children in

STARVing condition—

. Eggerth caught himself sharply, and his pencil began to move again. The grain—he figured rather more slowly than usual, because his mind kept skipping back to a ridiculous rhythm. *Verdammt!* He would not—

Inhabitants of the village, thirty families, or was it forty? Forty, yes. Men, women, children—small families mostly. Still, one could seldom expect to find seventeen children. With that many, a *frau* could be wealthy through bounties alone. Seventeen children. In starving condition. Why didn't *they* eat the gingerbread? Ridiculous. What, in the name of *Gott*, did it matter whether seventeen nonexistent, completely hypothetical children ate gingerbread, or, for that matter, whether they ate nothing but gingerbread LEFT

LEFT

LEFT a wife and SEVenteen children—

"Hell fire and damnation!" exploded Eggerth, looking furiously at his watch. "I might have finished the report by the time. Seventeen children, *pfui!*"

Once more he bent to his work, determined not to think of . . . of—

But it nibbled at the corners of his mind, like an intrusive mouse. Each time he recognized its presence, he could thrust it away. Unfortunately, Eggerth was repeating to his subconscious, "Don't think of it. Forget it."

"Forget what?" asked the subconscious automatically.

"Nothing but gingerbread LEFT—"

"Oh, yeah?" said the subconscious.

The search party wasn't working with its accustomed zeal and accuracy. The men's minds didn't seem entirely on their business. Harben barked orders, conscious of certain distractions—sweat trickling down inside his uniform, the harsh scratchiness of the cloth, the consciousness of the Poles silently watching and waiting. That was the worse of being in an army of occupation. You always felt that the conquered people were waiting. Well—

"Search," Harben commanded. "By pairs. Be thorough."

And they were thorough enough. They marched here and there through the village, to a familiar catchy rhythm, and their lips moved. Which, of course, was harmless. The only untoward incident occurred in an attic which two soldiers were searching. Harben wandered in to supervise. He was astonished to see one of his men open a cupboard, stare directly at a rusty rifle barrel, and then shut the door again. Briefly Harben was at a loss. The soldier moved on.

"Attention!" Harben said. Heels clicked. "Vogel, I saw that."

"Sir?" Vogel seemed honestly puzzled, his broad, youthful face blank.

"We are searching for guns. Or, perhaps, the Poles have bribed you to overlook certain matters—eh?"

Vogel's cheeks reddened. "No, sir."

Harben opened the cupboard and took out a rusty, antique matchlock. It was obviously useless as a weapon now, but nevertheless it should have been confiscated. Vogel's jaw dropped.

"Well?"

"I . . . didn't see it, sir."

Harben blew out his breath angrily. "I'm not an idiot. I saw you, man! You looked right at that gun. Are you trying to tell me—"

There was a pause. Vogel said stolidly, "I did not see it, sir."

"Ah? You are growing absent-minded. You would not take bribes, Vogel; I know you're a good party man. But when you do anything, you must keep your wits about you. Woolgathering

is dangerous business in an occupied village. Resume your search."

Harben went out, wandering. The men definitely seemed slightly distracted by something. What the devil could be preying on their minds so that Vogel, for example, could look right at a gun and not see it? Nerves? Ridiculous. Nordics were noted for self-control. Look at the way the men moved—their co-ordinated rhythm that bespoke perfect military training. Only through discipline could anything valuable be attained. The body and the mind were, in fact, machines, and should be controlled. There a squad went down the street, marching left, left, left a wife and—

That absurd song. Harben wondered where it had come from. It had grown like a rumor. Troops stationed in the village had passed it on, but where they had learned it Heaven knew. Harben grinned. When he got leave, he'd remember to tell the lads in Unter den Linden about that ridiculous song—it was just absurd enough to stick in your mind. Left. Left.

LEFT a wife and SEVenteen children in
STARVing condition—

After a while the men reported back; they hadn't found anything. The antique flintlock wasn't worth bothering about, though, as a matter of routine, it must be reported and the Polish owner questioned. Harben marched the men back to their quarters and went to Eggerth's billet. Eggerth, however, was still busy, which was unusual, for he was usually a fast worker. He glowered at Harben.

"Wait. I cannot be interrupted now." And he returned to his scribbling. The floor was already littered with crumpled papers.

Harben found an old copy of *Jugend* that he hadn't read, and settled himself in a corner. An article on youth training was interesting. Harben turned a page, and then realized that he'd lost the thread. He went back.

He read a paragraph, said, "Eh?" and skipped back again. The words were there; they entered his mind; they made sense—of course. He was concentrating. He wasn't allowing that damned marching song to interfere, with its gingerbread LEFT
LEFT
LEFT a wife and SEVenteen children—
Harben never did finish that article.

Witter of the Gestapo sipped cognac and looked across the table at Herr Doktor Schneidler. Outside the café, sunlight beat down strongly on the Konigstrasse.

"The Russians—" Schneidler said.

"Never mind the Russians," Witter broke in hastily. "I am still puzzled by that Polish affair. Guns—machine guns—hidden in that village, after it had been searched time and again. It is ridiculous. There were no raids over that locality recently; there was no way for the Poles to have got those guns in the last few weeks."

"Then they must have had them hidden for more than a few weeks."

"Hidden? We search carefully, Herr Doktor. I am going to interview that man Eggerth again. And Harben. Their records are good, but—" Witter fingered his mustache nervously. "No. We can take nothing for granted. You are a clever man; what do you make of it?"

"That the village was *not* well searched."

"Yet it was. Eggerth and Harben maintain that, and their men support them. It's ridiculous to suppose that bulky machine guns could have been passed over like little automatics that can be hidden under a board. So. When the troops marched into that village, the Poles killed forty-seven German soldiers by machine gunning them from the rooftops." Witter's fingers beat on the table top in a jerky rhythm.

Tap.
Tap.
Tap-ta-tap-ta—

"Eh?" Witter said. "I didn't catch—"

"Nothing. Merely that you will, of course, investigate carefully. You have a regular routine for such investigations, eh? Well, then—it is simply a matter of scientific logic, as in my own work."

"How is that progressing?" Witter asked, going off at a tangent.

"Soon. Soon."

"I have heard that before. For some weeks, in fact. Have you run into a snag? Do you need help?"

"*Ach,* no," Schneidler snapped, with sudden irritation. "I want no damn fool assistants. This is precision work, Witter. It calls for split-second accuracy. I have been specially trained in thermodynamics, and I know just when a button should be pressed, or an adjustment made. The heat-radiation of disintegrating bodies—" Presently Schneidler stopped, confused. "Perhaps, though, I need a rest. I'm fagged out. My mind's stale. I concentrate, and suddenly I find I have botched an important experiment. Yesterday I had to add exactly six drops of a . . . a fluid to a mixture I'd prepared, and before I knew it the hypo was empty, and I'd spoiled the whole thing."

Witter scowled. "Is something worrying you? Preying on your mind? We cannot afford to have that. If it is your nephew—"

"No, no. I am not worried about Franz. He's probably enjoying himself in Paris. I suppose I'm . . . *damn!*" Schneidler smashed his fist down on the table. "It is ridiculous! A crazy song!"

Witter raised an eyebrow and waited.

"I have always prided myself on my mind. It is a beautifully coherent and logical machine. I could understand its failing through a sensible cause—worry, or even madness. But when I can't get an absurd nonsense rhyme out of my head—I broke some valuable apparatus today," Schneidler confessed, compressing his lips. "Another spoiled experiment. When I realized what I'd done, I swept the whole mess off the table. I do not want a vacation; it is important that I finish my work quickly."

"It is important that you finish," Witter said. "I advise you to take that vacation. The Bavarian Alps are pleasant. Fish, hunt, relax completely. Do not think about your work. I would not mind going with you, but—" He shrugged.

Storm troopers passed along the Konigstrasse. They were repeating words that made Schneidler jerk nervously. Witter's hands resumed their rhythm on the table top.

"I shall take that vacation," Schneidler said.

"Good. It will fix you up. Now I must get on with my investigation of that Polish affair, and then a check-up on some Luftwaffe pilots—"

The Herr Doktor Schneidler, four hours later, sat alone in a train compartment, already miles out of Berlin. The countryside was green and pleasant outside the windows. Yet, for some reason, Schneidler was not happy.

He lay back on the cushions, relaxing. Think about nothing. That was it. Let the precision tool of his mind rest for a while. Let his mind wander free. Listen to the somnolent rhythm of the wheels, *clickety-clickety—*

CLICK!

CLICK!

CLICK a wife and CLICKenteen children in STARVing condition with NOTHing but gingerbread *LEFT—*

Schneidler cursed thickly, jumped up, and yanked the cord. He was going back to Berlin. But not by train. Not in any conveyance that had wheels. *Gott,* no!

The Herr Doktor walked back to Berlin. At first he walked briskly. Then his face whitened, and he lagged. But the compelling rhythm continued. He went faster, trying to break step. For a while that worked. Not for long. His mind kept

slipping his gears, and each time he'd find himself going LEFT—

He started to run. His beard streaming, his eyes aglare, the Herr Doktor Schneidler, great brain and all, went rushing madly back to Berlin, but he couldn't outpace the silent voice that said, faster and faster, LEFT

LEFT

LEFTawifeandSEVenteenchildrenin

STARVingcondition—

"Why did that raid fail?" Witter asked.

The Luftwaffe pilot didn't know. Everything had been planned, as usual, well in advance. Every possible contingency had been allowed for, and the raid certainly shouldn't have failed. The R. A. F. planes should have been taken by surprise. The Luftwaffe should have dropped their bombs on the targets and retreated across the Channel without difficulty.

"You had your shots before going up?"

"Yes, sir."

"Kurtman, your bombardier, was killed?"

"Yes, sir."

"Inexcusably?"

There was a pause. Then—"Yes, sir."

"He could have shot down that Hurricane that attacked you?"

"I . . . yes, sir."

"Why did he fail?"

"He was . . . singing, sir."

Witter leaned back in his chair. "He was singing. And I suppose he got so interested in the song that he forgot to fire."

"Yes, sir."

"Then, why in the name of . . . of— Why didn't you dodge that Hurricane?"

"I was singing, too, sir."

The R. A. F. were coming over. The man at the antiaircraft whistled between his teeth and waited. The moonlight would help. He settled himself in the padded seat and peered into the eyepiece. All was ready. Tonight there were at least some British ships that would go raiding no more.

It was a minor post in occupied France, and the man wasn't especially important, except that he was a good marksman. He looked up, watching a little cloud luminous in the sky. He was reminded of a photographic negative. The British planes would be dark, unlike the cloud, until the searchlights caught them. Then—

Ah, well. Left. Left. Left a wife and seventeen—

They had sung that at the canteen last night, chanting in it chorus. A catchy piece. When he got back to Berlin—if ever—he must remember the words. How did they go?

—in starving condition—

His thoughts ran on independently of the automatic rhythm in his brain. Was he dozing? Startled, he shook himself, and then realized that he was still alert. There was no danger. The song kept him awake, rather than inducing slumber. It had a violent, exciting swing that got into a man's blood with its LEFT

LEFT

LEFT a wife—

However, he must remain alert. When the R. A. F. bombers came over, he must do what he had to do. And they were coming now. Distantly he could hear the faint drone of their motors, pulsing monotonously like the song, bombers for Germany, starving condition, with nothing but gingerbread

LEFT!

LEFT

LEFT a wife and SEVenteen children in

STARVing condition with—

Remember the bombers, your hand on the trigger, your eye to the eyepiece, with nothing but gingerbread

LEFT!

LEFT

LEFT a wife and—

Bombers are coming, the British are coming, but don't fire too quickly, just wait till they're closer, and LEFT

LEFT

LEFT a wife and there are their motors, and there go the searchlights, and there they come over, in starving condition with nothing but gingerbread

LEFT!

LEFT!

LEFT a wife and *SEV*enteen children in—

They were gone. The bombers had passed over. He hadn't fired at all. He'd *forgotten!*

They'd passed over. Not one was left. Nothing was left. Nothing but gingerbread

LEFT!

The Minister of Propaganda looked at the report as though it might suddenly turn into Stalin and bite him. "No," he said firmly. "No, Witter. If this is false, it is false. If it is true, we dare not admit it."

"I don't see why," Witter argued. "It's that song. I've been checking up for a long time, and it's the only logical answer. The thing has swept the German-speaking world. Or it soon will."

"And what harm can a song do?"

Witter tapped the report. "You read this. The troops breaking ranks and doing . . . what is it? . . . . snake dances! And singing that piece all the while."

"Forbid them to sing it." But the minister's voice was dubious.

"*Ja*, but can they be forbidden to think it?

They *always* think of what is *verboten*. They can't help it. It's a basic human instinct."

"That is what I mean when I said we couldn't admit the menace of this—song, Witter. It mustn't be made important to Germans. If they consider it merely as an absurd string of words, they'll forget it. Eventually," the minister added.

"The Führer—"

"He must not know. He must not hear about this. He is a nervous type, Witter; you realize that. I hope he will not hear the song. But, even if he does, he *must not* realize that it is potentially dangerous."

"Potentially?"

The minister gestured significantly. "Men have killed themselves because of that song. The scientist Schneidler was one. A nervous type. A manic-depressive type, in fact. He brooded over the fact that the ginger—that the phrases stuck in his mind. In a depressive mood, he swallowed poison. There have been others. Witter, between ourselves, this is extremely dangerous. Do you know why?"

"Because it's—absurd?"

"Yes. There is a poem, perhaps you know it—life is real, life is earnest. Germany believes that. We are a logical race. We conquer through logic, because Nordics are the superrace. And if supermen discover that they cannot control their minds—"

Witter sighed. "It seems strange that a song should be so important."

"There is no weapon against it. If we admit that it is dangerous, we double or triple its menace. At present, many people find it hard to concentrate. Some find rhythmic movements necessary—uncontrollable. Imagine what would happen if we forbade the people to think of the song."

"Can't we use psychology? Make it ridiculous—explain it away?"

"It is ridiculous already. It makes no pretense at being anything more than an absurd string of nearly meaningless words. And we can't admit it *has* to be explained away. Also, I hear that some are finding treasonable meanings in it, which is the height of nonsense."

"Oh? How?"

"Famine. The necessity for large families. Even desertion of the Nazi ideal. Er . . . even the ridiculous idea that gingerbread refers to—" The minister glanced up at the picture on the wall.

Witter looked startled, and, after a hesitant pause, laughed. "I never thought of that. Silly. What I always wondered was why they were starving when there was still plenty of gingerbread. Is it possible to be allergic to gingerbread?"

"I do not think so. The gingerbread may have been poisoned—a man who would desert his family might have cause to hate them, also. Perhaps hate them enough to— *Captain Witter!*"

There was a blank silence. Presently Witter got up, heiled, and departed, carefully breaking step. The minister looked again at the picture on the wall, tapped the bulky report before him, and shoved it away to examine a typewritten sheaf which was carefully labeled IMPORTANT. It was important. In half an hour the Führer would broadcast a speech, one for which the world had been waiting. It would explain certain things about dubious matters, such as the Russian campaign. And it was a good speech—excellent propaganda. There were to be two broadcasts, the first to Germany, the second to the rest of the world.

The minister rose and walked back and forth on the rich carpet. His lip lifted in a sneer. The way to conquer any enemy was to crush him—face him and smash him. If the rest of Germany had his own mentality, his own self-confidence, that ridiculous song would lose all its force.

"So," the minister said. "It goes so. Left. Left. Left a wife and seventeen children—so. It cannot harm me. It can get no hold on my mind. I repeat it, but only when I wish to do so; and I wish to do so to prove that the doggerel is futile—on me, anyway. So. Left. Left. Left a wife—"

Back and forth strode the Minister of Propaganda, his hard, clipped voice snappily intoning the phrases. This wasn't the first time. He often repeated the song aloud—but, of course, merely to prove to himself that he was stronger than it.

Adolf Hitler was thinking about gingerbread and Russia. There were other problems, too. It was difficult being Leader. Eventually, when a better man came along, he would step out, his work done. The well-worn record slipped from its groove, and Hitler pondered the speech he held. Yes, it was good. It explained much—why things had gone wrong in Russia, why the English invasion had failed, why the English were doing the impossible by way of raiding the continent. He had worried about those problems. They were not really problems, but the people might not understand, and might lose confidence in their Führer. However, the speech would explain everything—even Hess. Goebbels had worked for days on the psychological effects of the speech, and it was, therefore, doubly important that it go through without a hitch. Hitler reached for an atomizer and sprayed his throat, though that was really unnecessary. His voice was in top shape.

It would be distressing if—

Pfui! There would be no hitch. The speech was too important. He had made speeches before, swayed people with the weapon of his voice. The

crucial point, of course, was the reference to Russia and the ill-fated spring campaign. Yet Goebbels had a beautiful explanation; it was true, too.

"It is true," Hitler said aloud.

Well, it was. And sufficiently convincing. From the Russian discussion he would go on to Hess, and then—

But the Russian question—that was vital. He must throw all his power into the microphones at that moment. He rehearsed mentally. A pause. Then, in a conversational voice, he would say, "At last I may tell you the truth about our Russian campaign, and why it was a *triumph* of strategy for German arms—"

He'd prove it, too.

But he must not forget for a moment how vitally important this speech was, and especially the crucial point in it. Remember. Remember. Do it exactly as rehearsed. Why, if he failed—

There was no such word.

But *if* he failed—

No. Even if he did—

But he wouldn't. He mustn't. He never had. And this was a crisis. Not an important one, after all, he supposed, though the people were no longer wholeheartedly behind him. Well, what was the worst that could happen? He might be unable to make the speech. It would be postponed. There could be explanations. Goebbels could take care of that. It *wasn't* important.

Don't think about it.

On the contrary, think about it. Rehearse again. The pause. "At last I may tell you—"

It was time.

All over Germany people were waiting for the speech. Adolf Hitler stood before the microphones, and he was no longer worried. At the back of his mind, he created a tiny phonograph record that said, over and over, "Russia. Russia. Russia." It would remind him what to do, at the right moment. Meanwhile, he launched into his speech.

It was good. It was a Hitler speech.

"Now!" said the record.

Hitler paused, taking a deep breath, throwing his head arrogantly back. He looked out at the thousands of faces beneath his balcony. But he wasn't thinking about them. He was thinking of the pause, and the next line; and the pause lengthened.

Important! Remember! Don't fail!

Adolf Hitler opened his mouth. Words came out. Not quite the right words.

Ten seconds later Adolf Hitler was cut off the air.

It wasn't Hitler personally who spoke to the world a few hours later. Goebbels had had a record made, and the transcription, oddly enough, didn't mention Russia. Or any of the vital questions that had been settled so neatly. The Führer simply couldn't talk about those questions. It wasn't mike fright, exactly. Whenever Hitler reached the crucial point in his speech, he turned green, gritted his teeth, and said—the wrong thing. He couldn't get over that semantic bloc. The more he tried, the less he succeeded. Finally Goebbels saw what was happening and called it off.

The world broadcast was emasculated. At the time there was considerable discussion as to why Hitler hadn't stuck to his announced program. He'd intended to mention Russia. Why, then—

Not many people knew. But more people will know now. In fact, a lot of people in Germany are going to know. Things get around there. Planes go over and drop leaflets, and people whisper, and they'll remember a certain catchy German stanza that's going the rounds.

Yeah. Maybe this particular copy of Astounding will find its way to England, and maybe an R. A. F. pilot will drop it near Berlin, or Paris, for that matter. Word will get around. There are lots of men on the continent who can read English.

And they'll talk.

They won't believe, at first. But they'll keep their eyes open. And there's a catchy little rhythm they'll remember. Some day the story will reach Berlin or Berchtesgarten. Some day it'll reach the guy with the little mustache and the big voice.

And, a little while later—days or weeks, it doesn't matter—Goebbels is going to walk into a big room, and there he's going to see Adolf Hitler goose-stepping around and yelling:

LEFT
LEFT
LEFT a wife and SEVenteen children in
STARVing condition with NOTHing but gingerbread *LEFT*—

THE END.

Until somebody figures out that rhythm—

10% For War Bonds Every Pay Day

is the next best rhythm!

BARRIUS, IMP

By Malcolm Jameson

● A sequel to "Anachron, Inc." A tale of business—a peculiar sort of business—and ancient wrongs where laughing gas and sudden death are crossed up.

Illustrated by M. Isip

The three days' leave at "home"—"home" meaning New York of 1957—had done Mark Barry, erstwhile major of Commandos but now trader extraordinary for the great Anachron company, a world of good. He strode through the main doorway of the home office building on Wall Street full of eagerness to get on to his next assignment. That, Kilmer, his sales manager, had said, would be as manager of the station in ancient Rome.

He gave no more than a passing glance at the throng of businessmen passing in and out of the building in their eternal quest for contracts. Nor did he pause this time, as he had on his first visit, to wonder about the many queer departments housed above. For he knew now something of the intricacies of intertemporal trade, and the meticulous care that Anachron took to avoid unduly upsetting the economies or cultures of the less civilized peoples and eras with which they dealt.

When he reached the floor on which Kilmer's office was, he stepped out of the elevator and walked briskly down the hall, humming cheerily

as he went. But he stilled his inward song the moment he was inside Kilmer's office, for that gentleman was sitting dejectedly at his desk, gnawing his fingers and scowling at a piece of paper on his desk. Barry knew already that his boss had long had the conviction that the business of intertemporal trade management was just one perpetual headache, and it was painfully clear that on this particular morning the managerial head was aching at one of its peaks. Kilmer acknowledged his entrance by a morose stare, then waved him wearily to a chair, after which he resumed glowering at the document that had furnished his daily upset. Presently he flipped it across to Barry.

"That's gratitude for you," he said, bitterly, and slumped deeper in his chair while Barry read the flimsy. It was an IT ethergram, dated at Rome in the year 182, routed via "Atlantis" base on Pantelleria.

WHAT DO YOU MEAN I'M FIRED YOU CAN'T FIRE ME YOU BIG STIFF STOP O. K. SHUT OFF YOUR DAMN SHUTTLES AND SEE WHO CARES I'M SITTING PRETTY STOP OR IF YOU THINK IT'LL GET YOU ANYTHING SEND DOWN ONE OF YOUR BRIGHT YOUNG MEN TO HELP ME RUN THINGS I'M TOO BUSY TO BOTHER STOP
PATRICIUS CASSIDUS SEN ROM

Barry laid the message back on Kilmer's desk and raised his eyebrows in silent interrogation. Kilmer sighed heavily and Barry thought he was on the verge of breaking down and weeping.

"That is from Pat Cassidy, our Roman representative—the guy you were supposed to relieve," explained Mr. Kilmer in his lugubrious monotone. "I picked him up in the depths of the depression, a jobless down-at-the-heels peanut politician. I gave him the best job he ever had. I made him filthy rich. And *this* is what I get."

Barry still did not say anything. The situation was far from clear.

"But it's not the personal angle that's biting me," Kilmer went on, "it's the business aspects of the mess. Nothing like it ever happened in our organization before. Up in Ethics they're wild, the Control Board is having fits, and the Disciplinary Committee keeps burning me up and asking me why can't I control my men. Export-Import horses me about quotas, but when I pass 'em along to Cassidy all I get is silence. I order him up here for conference and he won't come. Finally I tell him he's fired—and I get *this*. Hell!"

"But," asked Barry, "what's it all about?"

"Look," said Kilmer, significantly, dragging out a ponderous file. "It made some sense when it started out, but it gets screwier with every order."

Barry took the order file and riffled through it. In the first years, when Cassidy pioneered the Roman branch under the emperor Marcus Aurelius, his orders were what were to have been expected. Anachron exported to Rome vast quantities of modernized armor and weapons—drop-forged, chrome and molybdenum alloy stuff—enough to equip ten full legions from helmet to sandals. There were tons of Portland cement, hand-operated winches and capstans, derrick fittings and cordage for the harbor improvements at Ostia. Wheat and flour used to flow by the thousands of bushels, in return for olive oil, native wines, and especially marble statuary. Then, of a sudden, the nature of the orders underwent a sharp change. Instead of their being for the huge quantities desired by Anachron, they called for scattered items, a few of each, such as a pair of dental chairs, five complete sets of surgical instruments, or ten old-fashioned fire engines with hose and pumps to be operated by willing backs. The only quantity requisitions were two in number: one for twenty tons of the drug afeverin—a sulphanilimide compound similar in properties to quinine but far more effective—and an astonishing order for ten million *additional* plastic poker chips.

"During the entire last quarter," Kilmer wailed, as Barry handed the file back to him, "he hasn't sold one schooner load of stuff. We have forty fine two-masters rotting at their piers at Pantelleria waiting for something to carry. Still the overhead goes on while that guy fools around with piddling orders for poker chips and drugs. Can you beat it?"

"Must be a reason," ventured Barry. "Maybe Cassidy is playing a deep game and isn't ready to spring it."

"Maybe," said Kilmer, dismally. "But you haven't heard all. There is more to this than meets the eye. When we decided to open up a branch in Rome, we selected the island of Pantelleria for our secret base—it is not far from Carthage and centrally located as regards the empire. Cassidy sold the Romans the idea that he was from Atlantis and that his ships came all the way in past the Pillars of Hercules. It was a good idea—too good, for the Romans recognized him as a kindred sort, having similar customs and religion, and made him a citizen of the city. For an ex-politician like Cassidy, that was all he needed. I suspect he started some side lines that turned into rackets, but anyhow it was not long before he was rolling in dough. Then he upped and married the widow of a rich Roman senator, and on top of that wangled a seat in the senate for himself. That was bad enough, but old Marcus Aurelius kicked the bucket and a no-good playboy by the name of Commodus became emperor in his stead. Pat Cassidy and Commodus are buddies. That tears everything."

"How come?"

"If we fire Cassidy, he says he'll have our charter revoked. If we stop sending shuttles, Commodus will confiscate our warehouses and ships. Control says we have too heavy an investment down there . . . mustn't do that . . . have to do it some other way."

"Yeah," said Barry, softly, "I begin to get it."

He stirred in his seat and stared at Kilmer as the full implications of Cassidy's rebellion unfolded in his mind. Under ordinary circumstances Anachron had a sure-fire means of bringing a recalcitrant employee to terms. They had only to threaten to shut off his shuttles and leave him stranded wherever in time he happened to be, but until Cassidy became so enamored of ancient Rome, no other employee had shown symptoms of going native. Nobody conditioned to the twentieth century relished being marooned on the sawed-off stump of a branch time track in some barbaric age. In the Cassidy case the company would only be cutting off its nose to spite its face, for they would not only lose their properties at Atlantis, but also the buildings at Ostia and in Rome. Moreover, it would be ineffectual, for Cassidy wouldn't mind it in the least.

On the other hand, if the company fired him only to leave him at large in Rome, it would have an awkward situation on its hands, even if he did not carry out his threat to confiscate the properties. His successor would have as an adversary a renegade from his own century who was a disgruntled ex-employee to boot. He could not hope to get away with the pleasant little fictions employed by Anachron salesmen in other places and ages—for Cassidy knew all the answers. Also, there would be nothing to prevent him from divulging to the Romans various secrets hitherto forbidden by Ethics and the Policy Board. Such items as explosives, power machinery and electricity were on the list. Yes, it was pretty obvious that Cassidy's attitude posed a problem.

"What," asked Barry, "are you going to do about it?"

"He says here," Kilmer replied, "that he will accept an assistant. That's you. Go down there and build the business back to where it ought to be. That's job number one. *Then get Cassidy.*"

"Get him? Bump him off?" Barry thought that was going a bit strong.

"Oh, no. Not necessarily. A snatch will do. There ought to be plenty of jobless thugs and assassins roaming the streets hunting work to do the rough stuff for you. But I want Cassidy up here in this very office. Whether you talk him into coming or send him up in chains is all one to me. That is up to you—"

A messenger came in and deposited a memorandum on Kilmer's desk. It had a lurid red "Urgent" tag clipped to it. Kilmer read it and passed it on to Barry. It was a general order, effective at once. The memo read:

> In view of a recent embarrassing situation in one of our important branches, the following rule is promulgated. RULE G-45607: Hereafter, any Anachron employee who accepts any public office or honor in the era in which he is operating will forthwith be discharged and abandoned in that era. This penalty will be applied invariably and without regard for the magnitude of the company's investment in that era, the employee's previous good record, or surrounding circumstances.

"That means 'keep out of politics,'" said Kilmer. "Watch your step."

"I'll watch it," said Barry.

Within an hour he was ready to leave. A brief visit to the Roman room in the research wing fixed him up as to the special knowledge he would require. A skilled hypnotist put him *en rapport* with a pair of savants, and Barry arose shortly thereafter with his brain packed with magically acquired knowledge. He was familiar now with Roman laws and customs, and able to speak fluently in Latin and Greek. They also gave him a smattering of Aramiac, Gaulish, and the commoner Punic dialects in the event he had need to visit the provinces. After that a short stop at the costume room fitted him with a snow-white toga of fine linen for Roman summer wear—far lighter and more comfortable than the woolen ones the Romans wore. Then he went down to the shuttle room.

It was an interesting place, and one he had never seen before. True, he had made a round trip to Medieval France, but that had been on one of the big freighter shuttles operating out of the huge Export-Import warehouse uptown. The room he was in at the moment was a different sort of a terminal. Here was where the small one and two-passenger shuttles took off with special messengers and others sent abroad by the Home Office direct. Barry handed over his pass to the dispatcher in charge, and sat down to wait.

The room was large and divided in half by an iron rail which barred the passengers from the landing platforms. There were eight of those, each stall separated from the others by other iron rails. From time to time a shuttle would appear briefly in the space set aside for it, and its passenger would either step on or off, as the case might be, and the shuttle would vanish. Many of the travelers wore outlandish garb, even as the be-togaed Barry did. One resplendent creature stepped out of a shuttle wearing a suit of quilted cotton armor and a gorgeous headdress of colored feathers. His face was painted with vivid colors to a tigerish make-up.

"Hi, Steve," greeted another man in the wait-

ing room, this one dressed as a Chinese mandarin. "How you doing? Where you been?"

"Tenochtitlan," said the one with the Aztec getup. "We're trying to get an in with Montezuma before Cortez gets there and gums the works."

Barry was curious as to the exact workings of the shuttles, but he knew that was a secret he was not likely ever to know. One of the most inflexible of Anachron's many rules forbade that information to all but qualified shuttle operators. And there was a good reason for it. Before it had been made, in the early days, each trader was allowed his own, but there were accidents. Twice embezzling agents hopped into their machines with their loot and departed deep into the past for destinations unknown. On another occasion a salesman whose sweetie had a yen to meet Marie Antoinette undertook to gratify her. They borrowed a shuttle on a Sunday afternoon with the announced intention of crashing a garden party at Versailles. Whatever happened, they were never seen again. Then there was the time when four ex-employees, fully armed with hand grenades and submachine guns, invaded the big warehouse and swiped a heavy freighter. They said they were only going to Lima to lift the Inca treasure from the Spaniards and would be back in an hour or two. They did not show up again. So Anachron thought it best thereafter to restrict the knowledge of how to operate the intertemporal vehicles to a tried and selected few.

At length the dispatcher called out, "Special shuttle for Ostia . . . leaving berth six in five minutes—" and Barry hitched his toga about himself and made ready to shove off. A little bit later he was stepping out of the shuttle in a small steel-walled room which had but a single door. Beside the door was hanging the receiving end of a scanner.

"End of the line," said the shuttle operator, flicking over his controls. "If the coast is clear, step out that door. It has a spring lock and will lock itself behind you."

"How do I get back in here?" Barry wanted to know.

"Mr. Cassidy has the keys," said the operator. There was a click and a whir and the shuttle and operator vanished.

"Sweet, I must say," muttered Barry, glaring at the vacant floor. Then he picked up the scanner and peeped outside.

All there was to be seen was the huge dim nave of an almost empty warehouse. Barry went through the door and picked his way among the few stacks of barrels and boxes, looking for an outer door. The big main ones were closed and barred, but he found a bricked-off cubicle he took to be the warehouse office. That he entered. Inside there was a desk and chair. On the chair sat a good-looking Greek slave boy, leaning tilted back and with his feet sprawled out on the desk, reading what appeared to be an absorbing scroll.

"Where's the boss?" demanded Barry, seeing the fellow did not look up or take any other notice of him.

"How would I know?" answered the slave, without taking his eyes from the script. Instead he twirled the knobs and exposed a fresh page. Barry's outthrust foot neatly knocked the chair from under, and hardly had the flunky hit the floor before he found himself lifted by the scruff of the neck and shaken vigorously.

"Where is Cassidus?" roared the angry Barry.

"I . . . I c-can't tell you, sir," moaned the Greek between chattering teeth. "He might be in the forum, or again at the palace or the senate. Or he might be at home up on the Viminal, or at his villa at Tivoli, or at his slave ranch down the Appian Way, or—"

"How am I going to find him?" reiterated Barry, renewing his shaking.

"G-go to the temple of Hermes two squares down the street," answered the miserable slave. "Not the orthodox Hellenic one, but the Atlantian shrine. Make an offering. Hermes knows."

"Hermes, huh?" growled Barry. "What do you mean, offering?"

The warehouse clerk fumbled in his tunic and brought forth a pair of blue chips. He handed them both to Barry.

"One of these ought to be enough," he said.

"All right. Call me a taxi . . . er, litter, that is," said Barry, pocketing the chips. They were beautifully made—a typical Anachron product—being of a pearly, jadelike plastic and having a white fleur-de-lis inlay. They were light, glossy, and unbreakable. Then he followed the boy out onto the quay and climbed into a litter that happened to be passing at the very moment.

Barry felt very lordly as he lolled back in the cushions and was borne along jigglingly by the four husky porters. He cast his eye over the harbor improvements and approved. Neat concrete quays lined the basin, and out at the seaward edge ran an efficient-looking breakwater. The warehouse he had just left was Anachron's own, built to house its wares before business declined to its present sad stage. Then Barry saw a fading sign nailed to a derrick. It announced to the world that the harbor improvements of Ostia were being made by Patricius Cassidus, contractor.

The litter drew away from the water front and into Ostia's main street. As it approached the temple for which he was bound, Barry noticed with some surprise that above the pediment there were stretched some very familiar-

looking wires. But he asked no questions of the bearers, and let them deposit him at the door.

He found the inside of the temple somewhat surprising. It was not in the least in conformity to the hypnotic picture given him by the scholars. The place had more the appearance of a modern bank or steamship office than a temple to the messenger of the gods. Inside the door were two marble benches along which sat a number of urchins, most of whom wore sandals to which roller skates were attached. They looked to Barry like messengers waiting for a call. A little way inside a marble counter barred off the rest of the room. Beyond it stood a heroic figure of the god himself, complete with winged shoes and winged helmet. But, incongruously, between his feet sat a modern cash register, and cut into the pedestal below there was a mailing slot.

A robed priest stepped up to the counter wearing an ingratiating smile.

"A petition to his godship, sir?" he asked.

"I suppose so," said Barry, uncertain quite how to proceed.

"Local or long distance?"

"I'm not sure."

"Fill this out, please," said the priest, and pulled out a pad of printed forms from beneath the counter. He shoved it across and handed Barry a stylus. Barry looked at it, and there was a grudging admiration in his eyes. It was just the sort of thing he would have pulled if he had thought of it first. It looked like this:

PETITION

Hermes Atlanticus, Priest Receiving . . . . . .
Ostia Branch. Date ..... Time .
28 Julian Way. Amt. Offering .....
TO: Our indulgent lord Hermes, fleetest of messengers,
Hail! Be so kind as to inform. .....
of .....
that .....

Answer (check one)
Yes. No.

Barry filled it out, leaving the address blank. Surely, the priest knew Cassidy! The message simply stated that one Marcus Barrius wished the honorable senator to know that his new assistant had arrived from Atlantis and what to do? Then he handed it to the priest.

The priest read it through carefully, counted the words, pursed his brows for a moment in heavy thought, and then mentioned a number of sesterces. Barry had completely forgotten to supply himself with Roman money, but he had the odd gift of the Anachron warehouseman. Without a word he produced one of the blue chips and offered it.

"Ah," said the priest, with apparent delight. He fondled it a moment admiringly, then rang it up in the cash register.

Barry's petition was deposited in the slot, and somewhere behind the scenes came a faint bong. The amount of change that Barry got from his chip was amazing—one golden aureus, and a handful of lesser silver and copper coins. Blue chips, seemingly, were well thought of in Rome.

Barry stood back from the counter as other supplicants came up to file their petitions. The cash register clanged often as offering after offering was dropped into its drawer, and the little gong in the back rang as frequently. Above those sounds Barry's keen ears caught the telltale *buzz-buzz-buzzity-buzz* of a sending key, and he smiled inwardly at the sound. At last the priest beckoned him. He held a bit of paper in his hand which he did not deliver, but which he studied with a slightly bewildered look.

"Hermes has favored you greatly," interpreted the priest, "and sends you further tidings. The words are occult—aye, barbarous—but perhaps you will comprehend. Thus speaks the swift messenger:

"CROOK AN ELBOW WITH ME AT THE PALACE OF FORTUNA, CHOWTIME TONIGHT. SKIP THE WHITE TIE. TELL THE DRIP THAT'S WAITING ON YOU THAT YOU BELONG AND MAKE HIM KICK BACK THE ANTE. WHEN WE CHIN, IT'S ON THE HOUSE. PAT."

"Thanks," said Barry, and started to turn away. But the priest continued to stare at the flimsy in his hand with an unhappy expression.

"Chowtime? Drip? Chin—on the house?" he queried anxiously.

"Forget it," said Barry. For that matter the chip he had paid with had been on the house, and he was grateful for the hard money he had in change. He still had to have himself transported up to the city.

"How do I get to the Palace of Fortuna?" asked Barry, to take the priest's mind off the puzzling message. At once the priest brightened. Until then he had had a vague feeling that somehow the communication from Hermes contained a veiled reference to him, but apparently he had misread the Atlantian jargon.

"You can't miss it," he said. "It is the only place in Rome that is lit up at night. It is across the way from the coliseum—just follow the crowd."

"Thanks," said Barry, and walked away.

As his litter was carried down the street he stuck his neck out over the edge and looked back. From that point he could clearly see all of the small marble temple and its anachronistic crown of ruddy antennae.

"Racket Number One," he chuckled, "and a honey!"

The Palace of Fortuna was not misnamed. Or rather, it was undeniably palatial, though in some quarters the Fortuna part might be debatable. It was garishly lit by gasoline flares such as are used in tent shows, and stuck out in the dark streets of Rome like a Times Square in the heart of Podunk. Hordes of Roman sports were converging upon it, borne in litters, or staggering along on foot. It was an odorous mob, heavily perfumed and marcelled after the afternoon session at the baths, and it was clear that its members were on pleasure bent.

Inside, Barry was at once confronted with more of Cassidy's ingenuity, for he was beginning to recognize his touch wherever he turned. In a huge anteroom the arriving guests were shedding their hot togas for the better enjoyment of the evening. Sloe-eyed Egyptian damsels in a tricky and revealing livery attended to the checking. On the counter before them was the inevitable tray sprinkled with high denomination coins—tip bait. Barry grinned. He began to feel at home. Cassidy, whatever his faults, must be some boy.

In the foyer he came upon another interesting sight. Along one wall ran a row of cashier's cages wherein men armed with jeweler's loups, acids and balances, were weighing and appraising the vast miscellany of coins being offered them. They paid off in chips, the only medium of exchange, apparently, accepted within the walls of Fortuna's Palace. That, of course, had long been standard practice in the casinos of the world, but Barry saw a deeper significance, and his admiration for his opponent's shrewdness grew. He was insinuating Anachron chips into the Roman world as its currency!

For the coinage of the day was anything but reliable. Administrations had a way, when the fiscal going got rough, of balancing budgets by debasing their coins. What the aureus of one issue might contain in the way of gold was not at all what the next might have. Moreover, coins could be counterfeited, whereas a twentieth-century plastic product could not possibly be. So there it was—a uniform, unbreakable, beautiful, and unforgeable medium of circulation. And the beauty of it—from Cassidy's point of view—was that it could only be had through him. The fact that they could buy food and drink and places at games of chance where issued gave them limited value. But Barry had already seen that the far-flung Hermetic communication system was also accepting them gratefully. How many other rackets did Cassidy operate where the new coinage was good? And how could he lose? He bought the chips wholesale at five trade dollars the thousand; he sold them for whatever he said they were worth.

Barry wandered on past the bar, past the entrance to a sumptuous dining hall where groups were banqueting, and on through several game rooms. There was chuck-a-luck and craps, faro, poker and stud tables. Barry observed that liveried members of the house staff were most attentive to the latter, never failing to pinch off the exact amount of kitty fodder whenever it was due. He saw also that the well-patronized roulette wheels had four green zeros, and marveled at the unanalytical Latin mind. Nor did he overlook the gorillas strategically located amongst the throng, off-duty gladiators probably, ready and willing to slap down any overexuberant guest. And then a flunky plucked at a fold of his toga. The senator, he said, was awaiting his guest in his private dining room.

The dining room was at the end of a long marble corridor which was lined with soldiers of the Praetorian Guard resplendent in chromium-plated armor of Anachron's best design. A husky centurion looked Barry over curiously, but made no effort to block his passage. So, thought, Barry, Mr. Cassidy goes in for bodyguards! And then he was ushered into the dining room—one equipped in true Roman style, where Cassidy and two other guests reclined on couches while they toyed with their food.

"Hi, fella," greeted Cassidy, not bothering to get up, but waving to a vacant couch. "Welcome to our city. It's quite a place when you know the ropes. It's wide open, and I mean wide—all the way across."

Pat Cassidy in the flesh came as quite a shock. Barry had expected to meet a tall, lanky Irish lad of about his own age and who wore a rascally twinkle in his eye. The man before him may have answered to that description once, but no longer. He was disgracefully fat, and bald on top. His eyes were pale blue and goggly, with heavy bags beneath. His voice was hardly better than a croak, and he accompanied his opening remarks with a sordid wink and a knowing leer. Barry's growing admiration for the ingenuity of what rackets he had seen was suddenly tempered by disgust. The two boon companions were not of a type to reassure, either. Both were dissipated and foppish-looking, and one, whom Cassidy addressed as Quint, had a lurking air of cruelty about him that was distinctly unpleasant.

"Meet my pals, Quintus and Gaius," said Cassidy, as Barry arranged himself on the divan. "Gay is the high muckamuck of the telegraph company—or high priest of the Atlantian Hermes to the rabble. Quint manages the insurance company and runs my slave ranch for me. Clever fellow. Make friends with him and he'll give you ideas where you can pick up some pin money of your own. You gotta have a side line, you know, to make any real dough working for that lousy Anachron outfit. By the way, how's old

Kilmer doing? Still raving?"

"Oh, he'll be all right when exports pick up again," said Barry, with what diplomacy he could muster. "He was pretty sore after your starting up such a good wheat and flour business that the bottom dropped out of it all of a sudden. He says the Romans never did have enough wheat, and he wants to know how come?"

Cassidy chuckled and nudged Quint.

"Little family matter," he croaked. "My wife's uncle happens to be Procurator of Egypt and holder of the grain monopoly. Naturally he didn't like the competition. So when Commodus put a heavy duty on future grain—"

"I thought you and the emperor were buddies," said Barry.

"So we are," shrugged Cassidy, "but it's give and take, you know. I let him have his way about the wheat and he lets me have my way about some other things. It pays."

In the next two hours Barry found out how well it paid. By piecing together the scraps of conversation he was able to guess at the workings of several of Cassidy's major rackets. Gaius, for example, was also the chief priest of the Atlantian Temple of the Winds, close by which was an ancient cave known as the Grotto of Boreas. Concealed within it was a Diesel-driven ice plant served only by Gay's trusted slaves. Daily a caravan of wagons came and took away the blocks of ice produced overnight—ice which brought a fine price at the many public baths where the cool rooms could be made really cool. The ice was also much in demand at banquets, and had even been used at the palace in novel forms of torture.

Barry had already guessed that enormous revenues were derived from peddling the services of the god Hermes, but he had not guessed all. Hermes, being a god, did not necessarily serve all comers, however large their offerings. Quint, in the role of the god's messenger, systematically censored the messages handled between various parts of the empire. Therefore he and the rest of the Cassidy gang knew weeks in advance of military successes or reverses in the far provinces, of the success or failure of important money crops, of the number and worth of the emeralds and pearls brought up the Red Sea every year from India. Therefore they knew how to buy and sell in Rome to advantage. They had gone so far as to establish an embryo stock exchange where they dealt in futures to their immense profit.

Nor was that all. The order for the fire-fighting equipment that had so delighted Kilmer when it first came up had been for another purpose than he had imagined. Knowing the ever-present dread of fire that haunted Rome, the Home Office made the mistake of assuming that the initial order was merely for demonstration purposes and that other orders for larger amounts would shortly follow. That they did not, Barry now learned, was due to the organization of the Phoenix Assurance Society. The PAS paid no loss indemnities, but for the high premiums it collected it did undertake to dispatch its well-trained gangs of slave firemen to put out the fire on the premises of a policyholder. Since they had pumpers and hose and ladder wagons, and also maintained a fire watch, they were usually successful. On the other hand, the buildings of nonsubscribers were left to burn. Enrollments were slow in the beginning, but the judicious use of arson remedied that defect. Commodus himself, Barry learned, was one of the stockholders. Cassidy and company, having a strangle hold on the fire-prevention business, wanted no more fire equipment.

"Don't you see, fella," asked Cassidy, with his usual leering wink, "how much better it is this way? We get more in premiums every month than I would get in commissions on a hundred fire engines. Why be a sap? But you ain't heard nothing yet. You know all that afeverin I bought? I'd have been an awful sucker if I had sold that stuff over the counter at so much an ounce. It cures malaria in one or two doses, and the malaria stays cured. Right away I saw the right set-up. There's no gratitude to be had from a man for curing him of anything, but plenty of profit if you go about it using the old bean."

As Barry listened his disgust grew. He learned about the slave ranch. Every week hundreds of emaciated and anæmic slaves were herded into the place. Those broken-down slaves had been bought in the open market by underlings of Quintus for a paltry few hundred sesterces each, since such invalid slaves were not worth their keep. At the ranch they were rehabilitated. A few shots of afeverin, a build-up diet rich in vitamins, and abundant rest did the rest. On the face of it it looked like a humanitarian proposition. Actually it was anything but. For as soon as the slaves were well and strong again and had been taught a trade, they were displayed again on the market for sale. That time, after only a few months' overhaul, they brought prices up in the thousands.

"Not bad, eh?" said Cassidy. Then he asked what ideas Barry had as to setting himself up in a noncompeting racket. It was understood, of course, that Cassidy and perhaps Commodus would be cut in on anything new that was launched.

"Can't think of one at the moment," said Barry. It looked as if Pat Cassidy and his Rome were going to be hard nuts to crack. He wanted to feel his way.

At the end of three months Barry's distaste for Rome and everything about it amounted to

almost a phobia. He had seen the profligate rich throw money around in his own age, and he had also seen distress and poverty. But the orgies of the Roman wealthy and the sufferings of the poor outdid anything he knew. Nor was there in the annals of a grasping capitalism anything to equal the unconscionable rapacity of the Roman rich. Barry concluded that he would not live in Rome if they gave him the place and allowed him fifty weeks' vacation a year. All of which availed him nothing, for he committed the initial error of doing well from the start. His protests to Kilmer brought one unvarying response:

"Stick to it, you're doing fine." And then Kilmer would take what scant joy there was out of that unrelished compliment by asking when he was going to shove Cassidy off the perch and send him up home.

Barry's original intentions had been good. He started off with the idea of pepping up business as speedily as possible for Kilmer's sake. At the same time he wanted to study local conditions and find out just how firm Cassidy's grip was on the imperial machine. The answer to the latter was that Cassidy was all-powerful. Likewise, invulnerable. He was an artist at back-slapping and soft-soaping; his instinct as to when to flatter, when to browbeat, and when to bribe was infallible. He cared not a hoot how rich the other fellow got so long as he got his. It made him popular in Rome, where impoverished aristocrats fawned on him, and where the greedy wastrels of the court were ready to make any concession he demanded.

Barry saw that a frontal attack was out of the question. So he set about to develop the legitimate markets that hitherto had lacked appeal to the scheming Cassidy. He pawed through the many cases of sample materials that until then stood untouched in the Ostia warehouse. He induced Cassidy to go down there with him one day and look them over, sketching out his plans as he spoke of the possibilities in this and that. Cassidy surprised him by agreeing vigorously with all he said, and when Barry went to make out the quantity requisitions Cassidy—in his capacity of manager of the Roman branch—signed them without a murmur. On the contrary, there was a curious crooked smile on his porcine face as he scribbled his initials, and Barry thought he caught a glint of cheap cunning in his piggish eyes. But Barry filed the orders. It was a start.

The first to arrive were the ships laden with asphalt, salamanders, rollers and spreading tools.

Barry had noticed on his trips between the capital and the port that the roads, while excellent, were primarily military roads. They were well built and well drained, but they were surfaced with slabs of hewn stone. Whenever the clumsy vehicles of the day hit a joint it got a jolt. Barry saw at once that all that was needed to make them ideal highways was a thin topping of asphalt. And once that was applied the way was open for the introduction of lightweight vehicles such as wire-wheeled, ball-bearing, rubber-tired wagons for country use, and rickshas for the narrow streets of the city proper.

Cassidy astonished him by appearing in person on the dock while the schooners were being discharged. He waddled into the warehouse office, accompanied as always by his guards, and handed Barry an order for one million sesterces. It was for the paving material and tools.

"I thought you said the government would pay twice this much," said Barry, turning the order over in his hands. A million sesterces scarcely covered cost, freight and overhead. "Or three times," amended Barry.

"They will. To me," said Cassidy, blandly. "I'm buying it for my construction company; it has the contract to resurface the first two hundred miles."

"But—"

"Listen, buddy, get wise to yourself. Kilmer will be happy—the stuff is moving, ain't it, and the company breaking better than even? Why should you and I lean over backward and let them skim the cream. That's for us—me, and maybe you."

"But—"

"I figured we might need protection," Cassidy croaked on, "what with the chiselers here and in case Kilmer tries to get tough again. So I had a talk with the emperor and everything's fixed. You think patents are a good thing, don't you? Well, now we've got 'em. A pal of mine named Flavius has been made Quaestor of Patents. I took up our sample line and filed on 'em. That, and a little grease to Flav did the trick. From now on I've got the sole and exclusive right to use or sell any of the things we bring in, see? I'm your customer, see?"

Barry saw. He saw what Cassidy wanted him to see. He saw more than that. He saw red. But he kept his mouth shut. His opportunity had not come; it was not even in sight. So he carried on.

His next lesson in metropolitan politics came when the rickshas were delivered. Cassidy had a double strangle hold on those, for he not only controlled their sale as patentee, but their use. Barry had completely overlooked an old Roman ordinance dating from Julius Caesar's time forbidding the use of the streets by any wheeled vehicle between the hours of dawn and dusk. Cassidy swore that he was helpless to get the edict repealed, but he did succeed in having it modified. As amended the ukase read: "Wheeled litters may be operated by approved persons." The only approved "person" turned out to be the Capitol Rapid Transit Co., whose ownership Barry had no trouble guessing.

He struggled on. He established a big department store just off the Via Sacra and stocked it well. He put in a line of kerosene lamps with glass chimneys and braided cotton wicks, and sold the oil to keep them lit. They were instantly popular, replacing as they did the smelly and nonluminous olive-oil burners theretofore used. He introduced sugar which was at once bought in vast quantities by the vintners to improve their heavier wines. No longer were the ancients restricted to the choice between vinegary clarets or the sickish honey-sweetened variety. Hardware, comprising all manner of tools, swords and daggers, iron pipe, nails and so on, went well. Cosmetics, especially perfumes, found an insatiable demand. Romans had always used the latter without stint, but since its base was olive oil and not alcohol, it left them greasy and all too often with an overriding rancid odor. In exchange for those importations Barry sent back home shiploads of marble statuary, Greek pottery, and many casks of the better wines and olive oils.

Cassidy kept his hands off the department store, but for a price. Barry had to set him up in one more monopoly—the press. Job presses, type, ink, paper and other accessories were brought down and the *Daily Stentor* was duly launched upon an insatiable Roman reading public. Cassidy erected billboards and soon the streets of the great city were gay with lurid lithographs announcing the coming gladiatorial contests or races at the circus. Barry watched the growth of the printing business with some disgust, then turned back to his job of building up Anachron's business.

He established a chain of soda fountains, imported cigarettes, bananas, chocolate, tomatoes, and many other novelties. Then he undertook to try his hand at tempering the brutality of the Romans. He was not forgetful of the company motto—"Merchants, not Missionaries"—but he had to live in Rome, and the all too frequent sound of cheering welling up from the stands about the blood pit of the Coliseum offended every fiber of his being. Barry was not a tender-minded man. He had participated in plenty of carnage, but that had been in time of war and had at least the merit of necessity. Not so the senseless butchery that was committed under the name of "games." The feeding of huddled groups of meek martyrs to ravenous beasts, or the fiendish hacking away of one another's limbs by gladia-

tors for no other purpose than to amuse a sadistic and jaded mob was to Barry's mind a crime against nature. So, he thought, the next step is to begin the education of these people. They can learn that games of strength and skill do not necessarily have to be played in a wallow of gore.

"Why not?" remarked Cassidy, carelessly, when Barry broached the matter of introducing football. "It's a good, rough game. The customers ought to lap it up. I'll speak to Quint about it. He has a string of reconditioned gladiators I sold him, and no doubt he'll make 'em into a team and back 'em against somebody else's."

It was soon arranged. Barry sent a hurry call to home for balls and uniforms and then spent his spare time for several weeks in coaching the new teams. One day the Master of Games was there, and after watching the drills and scrimmages for a while, expressed great satisfaction with the new idea.

"We've got it," he assured Barry. "Just leave the rest to us."

In the period that intervened before the première of the novel game Barry swelled with justifiable pride whenever he saw the announcements of it on Cassidy's many billboards. He even swallowed his feelings when he received the imperial command to be present as the guest of honor. That meant sitting in the imperial box beside the infamous Commodus, which also meant that he would have to go early and see the whole show. It was the preliminary massacres he dreaded to witness, for he had no stomach for pointless slaughter designed only to whip the crowd to the proper level of frenzy for the introduction of the main event. But he decided to make the personal sacrifice of enduring them for the sake of the ultimate greater gain.

The preliminaries were a greater ordeal than he had bargained for, and he found his revulsion for things Roman climbing to new peaks. His disgust now included the women as well, for they appeared to be even more savagely bloodthirsty than the men. The representatives of their sex he loathed most were the so-called Vestal virgins. He wondered whether their thumbs were so jointed that they could only be turned downward. But the most odious feature of the early games was furnished by Barry's own host—the vain and boastful Commodus. From time to time he rose in his box to display his consummate skill as an archer. His arrow infallibly found the throat or heart of whatever wild beast or luckless gladiator he picked as a target. It was admirable shooting and the unfortunates were doomed to die in any event, but it was the whimsical way in which the emperor chose his victims that irked Barry most. Of all the guests in the box he alone refrained from murmuring the expected phrases of fulsome praise, a circumstance that did not go unnoticed by Commodus. But the emperor chose to restrain himself. A haughty but vindictive look was all he visited on Barry then, but Barry knew that from that moment he had a mortal enemy.

By the time the arena had been cleared of the corpses of the last of the earlier entertainers, Barry was already sick with suppressed rage and impotent pity. He could only grit his teeth and clench his hands to await the verdict of the crowd upon his own humane innovation. Trumpeters and heralds came in. The announcements were made, and Barry noted with some satisfaction that he was named as the introducer of the new "thrilling, stupendous, astounding spectacle brought from the far isles of Hesperides." Then he sat back a little more at ease. A build-up like that would help his game go over.

The gates were flung open, and the teams marched in. Barry sat up abruptly as if jabbed suddenly with a bayonet. He gasped. He stared and stared and gasped again. Had it not been for the announcement and the Master of Games marching in the lead carrying a single gilded football in his arms, Barry would never have guessed that the game he was about to see had any relation to football. He watched with horrified eyes as the sides were taken and the line-up made. There was no kickoff; the ball was simply awarded by the umpire after the quarterbacks tossed the dice. The only other football-ish feature was the goals—gilded baskets at opposite sides of the arena.

The teams consisted of about a hundred men on the side. Each fell in in two ranks, the first crouching, the second standing behind with naked swords in their hands. All wore heavy body armor, spiked steel helmets, gaffs at their heels, and daggers at their belts. A small cloud of *retiarii*—lithe and agile gladiators armed with nets and tridents—covered each end, evidently for the purpose of discouraging end runs. But it was the back formation that afforded the big thrill. Each quarterback—and judging from the delighted howls from the stands they must have been popular champions—rode a mighty war chariot whose wheels were fitted with murderous revolving scythes. The other backs, of whom there were about a dozen to the side, rode horses. They carried lances and battleaxes hung at their saddlebows.

There was a fanfare of trumpets, then a single prolonged bray. As its hoarse note died, the teams plunged into the fray. The quarterback with the ball—which he carried in a net slung over his shoulders—attempted an end run, the cavalry of his backfield preceding and flanking him by way of interference. Barry's hands gripped the stone rim of the box as he watched

the horror of the scrimmage that followed. His senses reeled . . . the crash of impact as the two lines met head-on . . . the dozens of individual duels . . . the raging juggernaut plunging around the left end . . . the futile efforts of the linemen to break through the fringe of horsemen to complete their tackle by disemboweling a chariot horse. There followed the countercharge of the defending chariot . . . the hideous melee that followed when the two war buggies met head-on only to capsize into a welter of spinning wheels, kicking and screaming horses, slashing, stabbing and gouging men. Many died before the armored referees fought their way into the midst and declared the ball at rest. Barry hardly heard the next braying of the trumpet, or the clarion voice of the umpire calling out, "First down, forty paces made good. Time out for replacements."

Barry shuddered and closed his eyes. He already knew the routine of the scavenger squads with their mules and flesh hooks. He did not want to see any more. All he knew was that he had failed and failed miserably. The wild howling that rent the stands was proof of that. Rome was at its pinnacle of delight. They had just witnessed the opening gambit in what undoubtedly would prove the fiercest and goriest form of entertainment any had seen. They yelled and stamped and called for "Marcus Barrius, the great Atlantian gamester!" Commodus rose, acknowledged the applause—which he naturally took for himself, since *he* was the patron of the game—and then, as a sop to the cheering multitude, took the chaplet from his own curled locks and jammed it on Barry's head.

Barry stood stunned for a moment, paralyzed with the shame and horror of his situation. His and Commodus' eyes locked and there was in their mutual gaze all the venom of the basilisk, generated on the one part by sheer natural cruelty, on the other by outraged honor. Barry raised his hand very deliberately, snatched the accursed wreath from his head and stamped on it. He contemptuously turned his back on the emperor and stalked past the trembling other guests and out of the box. He expected to be seized at any moment, but no order was given to stop him. Just as he was almost clear of the place Commodus' voice drifted to him above the pandemonium that filled the tiered benches. It was shrill and taunting.

"We shall meet again, my dear, dear friend, in this very place. And soon!" And the voice died away in peals of merry, sardonic laughter.

Barry was in a dark and bitter mood. He had walked the empty streets unmolested, but after he reached his apartment he paced the floor for hours in agitated thought. The jig was up; that was clear. Now what do? For now that he had publicly insulted Commodus his life was not worth a plugged nickel if he stayed in Rome. Barry knew that he had not only incurred the undying imperial enmity, but the scorn of the populace by showing his disgust at the shambles of the arena. Moreover Cassidy was aligned against him. The rupture with Commodus was not the only one of the day; earlier Barry and Cassidy had quarreled. Their break had come less than an hour before the game.

It was about an effort Barry made to ameliorate the ravages of the bubonic plague that was terrorizing the poorer districts of the city. It had raged spasmodically ever since being brought back from Asia by returning soldiers several years before, and the Romans in their ignorance were doing nothing whatever about it.

"It would help," suggested Barry, since Cassidy's co-operation was essential in view of his being the Pontifex Maximus of his system of synthetic Atlantian gods, "if you would dedicate one of your temples to your god of healing . . . Aesculapius, wasn't it? . . . and pass the word on to the people that he craves live rats as sacrificial offerings. Twenty rats a head would do it, I think, and you could promise them relief from the disease. The temple would have cages, and an oil-burning incinerator—"

"Are you crazy?" asked Cassidy. "What's the big idea? There's no market for rat carcasses that I know of. Why should I put aside a good piece of real estate, pay priests salaries and all of that to collect rats? I don't get it."

"We stop the plague," explained Barry patiently. "It's very simple. Bubonic plague is a rat's disease. Rats have fleas. When a sick rat dies his fleas have to hunt another home. If they can't find another rat, a human will do. Then the human gets sick and dies. If you kill the rats with the fleas still on 'em—zippo, no more plague."

Cassidy shook his head.

"Not practical. You've got something there, but you don't know how to handle it. When you put out good money you expect to get something back. Now here's the way we'll set the thing up—"

Barry listened in disgusted amazement as his piggish contemporary outlined the scheme. Barry was to order a stock of disinfectants. Cassidy would organize an exterminating company and put on an educational campaign on his billboards and in the paper. After that everything would be set. For a substantial fee the new company would clear a house of rats. That way it would pay.

"See?"

"No. I don't see." Barry did not bother to conceal his loathing. The heaviest toll taken by the plague was from the poorer districts, in the slums that nestled in the valleys between the

hills, in the foul *insulae* where poor freedmen boarded. Not one there could raise the fee and it was rank nonsense to expect the grasping landlords to pay. Cassidy's plan might make him a little money, but could have no discernible effect on the plague. All Barry's pent-up hatred of the man boiled over, and for five minutes he told him what he thought of him. He pulled no punches and the blunt language he used was appropriate to his opinions. Barry had fought on five continents and the seven seas and he knew how to express himself.

"That washes you up," said Cassidy in cold fury toward the end. "No man can talk like that to Pat Cassidy and get away with it," and flung himself from the room.

Yes. Barry had good reason for the feeling that his days in Rome were numbered. He was up against a combination of ruthless power and unscrupulous wealth headed by two men he knew were out to get him. His choice was narrow. He could stay and take it, or he could cut and run. An S O S to Kilmer would bring the little shuttle for his getaway, but that was a course that Barry firmly rejected. He did not see how he could win in the coming fight, but he didn't like a quitter. He wouldn't go running to Kilmer admitting failure and with his work undone, for Kilmer had instructed him to unseat Cassidy and ship him home. Instead of that, he had only intrenched the man more firmly than ever. Barry set his jaw. It was to be a hopeless fight, but he would not run from it.

Five minutes later he was in the editorial rooms of the *Daily Stentor* and at his crisp orders quailing subeditors scurried about killing the issue they were just about to put to bed. None dared oppose him, for they were slaves and thought him to be acting for their master. They knew the slightest disobedience might bring them under the lash.

"Scare head," ordered Barry. "Now take this."

For an hour he dictated. The trembling scribes gasped as they took down the treasonable and blasphemous words. They were between the devil and deep blue sea; the whipping post on the one hand, the chance of crucifixion on the other. For Barry had decided to go the whole hog.

He lit into Cassidy first, revealing the workings of his many rackets. He showed how any Roman could rid himself of malaria at the cost of a few small silver coins if afeverin were only on general sale. He told how the Hermetic telegraph system worked, of its exorbitant charges and the misuse made of the messages intrusted to it. He pointed out the iniquity of the fire protection racket and its excessive cost. He recited his vain efforts to have something done about the plague. Then he dealt with some of the minor rackets. Cassidy had taught several of his slaves something of plastic surgery with the result that they carried on a shady side line. Freedmen or escaped slaves who had been branded on the forehead with the symbol for thief could go to Cassidy's and have the skins of their faces renewed with unblemished foreheads. He mentioned, too, the abuse of the supplies of Mercurochrome. That had been ordered for surgical use for the army, but instead was used to paint the faces of the palace harlots. Barry was not sure what had become of the dental chairs and forceps, drills and the rest, but it had been hinted that they were used for special guests in one of Commodus' torture chambers.

That led him to Commodus and his connection with the Cassidy outfit. Barry painted him as the playboy he was, excoriated him for his conceit and cruelty. He went out of his way to ridicule his habit of descending to the floor of the arena and fighting in person as a gladiator. Barry knew that was a shot that would go home, for it was the scandal of Rome. The old aristocrats had shivered when Nero sang to public audiences; now they had an emperor-gladiator—many steps lower than a mere buffoon.

At length Barry came to the finish. He spent the rest of the night seeing that the paper went out in the form he wanted. At dawn he retired to his apartment for what rest he could get. He knew it would not be long before the soldiers would be coming for him.

It was a grizzled old centurion that made the arrest. He brought a file of twenty soldiers with him and dragged Barry protesting through the streets. The destination was the palace. On the way they passed the statue that Commodus had recently erected in honor of himself in which he was depicted as the reincarnation of the demigod Hercules. Barry glanced at it and his lip curled.

There was no trial. There was only a harangue from Commodus. The essence of it was this:

"You have chosen to ridicule me as a fighter. Very well. Five days hence we will meet in the arena and see who is the better fighter. Choose any arms you please so long as there is no metal about you."

That was all. Barry was led back to his apartment. Soldiers were all over the place and he was under close arrest, but within his own rooms he was not interfered with. He sent off a long dispatch to Kilmer, bringing him up to date on happenings, making it clear that he was having to fight in self-defense. The company's rules as to mixing it up with peoples of other ages were adamant. If by any chance he should win, he did not want to have another battle with the boss over how he came to duel with an emperor.

The day set for the conflict Barry was hustled off to the coliseum early in the morning. They put him in a dark and filthy cell along with a dozen others selected to fall beneath Commodus' sword. All were going in the role of *retiarius*, since the only feasible weapon they were allowed was the net. Nothing else could possibly avail against the emperor's heavy body armor and helmet. But there was little hope among them. Commodus was most dextrous at evading the net; none had ever snared him. Nor did anyone wish really to try. No one knew for certain what the penalty for winning would be, but neither was he anxious to find out.

Barry was dressed simply in cotton shorts and singlet. He wore no helmet, carried no net or other recognizable weapon. But in a little sling there were three glass balls. He had chosen those from among the sample items as being probably of the most real service. He had had them sent down for demonstration, but his other duties had prevented him getting around to them before. Now, he thought grimly, we'll show them off.

They could hear little while waiting in the dungeons below the grandstand, but Barry knew from what he did hear when the games got under way. Later the guards came and took out his cellmates a few at a time. Not one came back. Barry surmised that his adversary was warming up on a few easy victims. And no doubt he was saving Barry to the last. Barry had not been able to find out just what effect his published broadside had had, but whatever its effect it must certainly have made him a marked man. Probably half a million people fought for places to see the bout of the day—Commodus versus his Atlantian detractor.

Then Barry was out in the arena. Tumultuous shouting filled the air and the seats were alive with color and movement. Commodus stood in the very center of the arena, while many spots of bloody sand attested to the exercises he had already completed. He waved a reddened sword and shouted a derisive epithet. But he waited cagily to see what Barry would do. Barry did nothing for a minute or so, then advanced slowly toward his adversary. So far his hands were empty. Within ten paces of Commodus he stopped and waited. Then Commodus gathered himself for the charge, brandished his weapon, and launched forward.

Barry had not been the star pitcher of his Commando unit's team for nothing. So quick that the eye could hardly follow, he snapped one of the glass balls out of the sling and hurled it straight at Commodus. It struck him squarely on the visor of his helmet. There was a puff of whitish vapor, and then Commodus was on his knees, blubbering and praying. His sword dropped to the sand and the buckler rolled away. But the gladiator emperor knelt and wept. Like a big wind, a monumental gasp went up from the tiered spectators. Commodus had yielded without a stroke being delivered! He was begging for mercy!

Barry waited a discreet few seconds, then strode forward and picked up the fallen sword. The gas bomb he used contained a new modification of the old tear gas. It not only brought tears by the usual reaction, but engendered the emotions that normally accompanied tears. It dissipated rapidly in the open, but those who breathed it were under the effects for hours. Barry knew that Commodus would continue to grovel and snuffle for some time. He disregarded the whimpering figure at his feet and looked to the box for the verdict. To his astonishment it was thumbs down! A great hush had fallen on the multitude, for the brown-clad mob in the upper seats were awed by the unprecedented disaster. But the knights and nobles in the boxes, not forgetting the pious Vestals, were clamoring for the victim's blood.

Something clicked within Barry. He had been calm until then; now he knew fury. What a people, to expect him to stab a man to death in cold blood! He stared up at their relentless faces. Each probably had his own excellent reason for wishing Commodus' death, but Barry did not intend to be the one to gratify them. On the contrary, he estimated the range carefully, then hurled his remaining two bombs—one into the imperial box, the other high up in the stands. He waited silently for their effect.

It was stupendous. In another instant the aristocrats were shedding tears, beseeching mercy upon themselves, Commodus, anybody and everybody that might be in need of it. The frigid Vestals melted. For once their thumbs went up as the salty water rolled down their cheeks. Even the soulless Cassidy, who had come to witness his assistant's murder, blubbered some. But it was in the stands where the unexpected happened. All hell broke loose. They went crazy. No Roman had ever seen compassion; no Roman could understand it. Yet there were among them some of the city's outstanding fight fans—men who loved their gore and knew good slaughter when they saw it—and these hard-boiled eggs were sniffling like whipped children, calling: "Don't hurt him, oh, don't hurt him, please, honorable Barrius." The inevitable succeeded. Riots broke out in every section. In two minutes a free-for-all was raging all over.

Barry cast one contemptuous look about, hurled the sword from him, and stalked disgustedly out of the arena. Two guards pounced on him at the

gate and led him away to a cell, but he did not care overly. He had shot his wad and there was no more to do. But he was curious as to the outcome. He only hoped that he would learn about it before they finished him off, and also added the hope that the process of being finished off would not be too messy or take too long.

He knew the worst when they led him into the torture chamber. Most of the stuff hanging about were the same old chestnuts men have used for ages—whips, brands, pincers and the like, but the instrument of which they were most proud Barry recognized at once. It was a gleaming dental chair, and a grinning executioner was fitting a drill to its socket. A helper stood by to pedal the gadget. Rows of wicked-looking shiny forceps, hooks and crooked wires hung nearby.

"This won't hurt," soothed the fiend, as the attendants strapped Barry into the chair. "Not like knocking 'em out. It just takes longer."

Somebody stuck a wedge into Barry's mouth and the executioner closed up with his drill a-whirring. There was an interruption. The door burst open and a high official entered. It was a tribune of the Praetorian Guard.

"Hold everything," he said. "They want to examine this man before the senate. The honorable Patricius Cassidus says that he used an Atlantian gas and they want to know more about it. Make ready to take him there at once, and see that he has some of the magic gas with him."

Barry relaxed. Anything was welcome after what he had steeled himself for. But gas? There wasn't any more, and it would take him days to get some. At that, he couldn't see how it would help his cause to reduce the august senate to a state of weepy soddenness. Then his eye lit on a contraption in the corner. It was a little buggy-like affair carrying a steel flask of oxygen and another of nitrous oxide. From the reading of the gauges it was clear that they had never been used, probably from ignorance. But as part of Anachron's dental equipment, there they were.

"This is more of the gas I used," said Barry, indicating the nitrous oxide container. "Have that brought along."

The session in the senate did not last a great while. Before he reached the hall Barry learned that in the pandemonium raging after he left the arena, a wrestler named Narcissus, who had some grievance against Commodus, had obeyed that section of the mob who were demanding that he be put to death. Narcissus at once performed the job by throttling him in his best professional manner. In consequence, by the time Barry was conducted into the chamber, the senators had other and more important things on their minds. They were whispering among themselves as to how they would line up behind this or that candidate for the emperorship. Cassidy was of course one of the outstanding candidates. It was of him and other contenders that they were thinking when Barry's guard brought him in. But they snapped out of their huddles when Barry was arraigned before the house.

"You are charged with using a noxious gas to defeat our emperor," said the president sternly. "We demand to know what that gas is."

"Here it is," said Barry blandly, cracking a valve. There was a hissing, and he leaned over and sniffed. He straightened up, smiling happily. "A lovely gas, really. What I took to the coliseum must have gone sour with the heat."

"Let me smell that," demanded Cassidy, stepping forward. Now Cassidy, while a versatile fellow, did not know the conventional marking for gas carboys, so he could not know until he took a whiff what sort of gas it was. Even then he didn't recognize it. But he did like it. It gave him a lift. He took another drag. Then he began to laugh and dance a little.

"Suwell, deelightful," he babbled, "have a sniff on me, fellows."

Curious senators crowded up, a wee bit doubtful, but wanting to know. But as each drew nearer, his doubt melted. He beamed, he giggled or burst into ribald song. Others capered, embracing anyone who came near. In a very few minutes it was a gay and happy party. All were drunk as lords. Cuckoo. Absolutely. And not the least of them was Barry. Indeed, in a moment the gas got the best of him and for a little while he passed out.

When he came to he found himself the center of a rollicking back-slapping crowd. He seemed to be popular. They liked him. But they were saying strange things to him. Were they kidding? For in their hilarious mood it was hard to judge. Yet he gathered that in their elation generated by the laughing gas they had dismissed any complaint against him. They had gone further. They had elected him to the vacant office of emperor.

"Ave, Caesar," they shouted, stamping up and down, "Hail, Barrius, Imperator Romanorum! Whee! Yippee!"

Barry was still a bit woozy himself, so he did not fully grasp what had been done to him. Then it began to dawn on him. He backed away from his enthusiastic admirers with growing concern on his face. Oh golly, golly, golly. He had played hell now! Rule G—45607! "Whoever accepts any public office . . . et cetera, et cetera . . . will be cut off." Ow!

"Barrius, Imperator, huh?" groaned Barry. "That sinks me."

THE END.

THE CAVE

By P. Schuyler Miller

● On Mars the laws and customs of existence must be different, and when a dozen of a dozen races seek shelter in a cave—

Illustrated by Fax

The cave measured less than a hundred feet from end to end.

It opened at the base of a limestone ridge which rose like a giant, rounded fin out of the desert. Its mouth was a flat oval, a shallow alcove scoured out of the soft stone by wind and sand. Near one end a smooth-walled tunnel sloped gently back into the ridge. Twenty feet from the entrance it turned sharply to the right and in a few feet swung back to the left, paralleling its original course. Here it leveled out into a broad, flat channel not more than four feet high. This was the main chamber of the cave.

The big room, like the rest of the cave, had been leached out of the limestone by running water, long before. The water had followed a less resistant seam in the rock, dissolving out a passage whose low ceiling rose and fell a little with irregularities in the harder stratum overhead, whose floor was flat and water-polished in spots and in others buried under a fine yellow clay. A little past the midpoint the room opened out into a kind of inverted funnel in which a tall man could stand erect, a tapering chimney which quickly dwindled to a shaft barely big enough to admit a man's hand. Here the floor of the cave was

lower and the walls, which had drawn together until they were less than ten feet apart, were ribbed and terraced with flowstone.

Beyond the chimney the ceiling dropped suddenly to within a few inches of the floor. By lying flat on his face and squirming along between the uneven layers of rock a thin man might have entered here. After measuring his length perhaps three times he would have been able to raise himself on one elbow and twist into a sitting position, his back against the end wall of the cave and his head and shoulders wedged into a crevice which cut across the main passage at right angles. This crevice lay directly under the highest part of the ridge and vanished into darkness above and on either side. Water must at one time have flowed through it, for the harder silicious layers in the limestone stood out on the walls in low relief like fine ruled lines drawn in sooty black. Not even air stirred in it now.

Twenty feet in the winding entry—six or eight feet at the bend—another thirty to the chimney and fifteen or twenty more to the back wall; it was a small cave. It was also very old.

The limestone of which the ridge was formed was perhaps the oldest exposed rock on the surface of that small old world. It had been laid down in fairly deep water at a time when there were seas where there were only deserts now. There had been life in those seas; where wind or water had worn away the softer lime, their fossil bodies stood out from the surface of the gray stone. There were fluted shells like glistening black trumpets—swarms of tiny big-eyed things with fantastically shaped armor and many sprawling arms—long ropes of delicate, saw-edged weed whose fossil tissues were still stained a dull purple—occasionally fragments of some larger thing like an armored, blunt-headed fish. They had been alive, swarming and breeding in the shallow sea, when Earth was no more than a scabbed-over globe of slowly jelling flame.

The cave itself was very old. It had been made by running water, and it was a long time since there was much water on the dying world. Water, sour with soil acids leached from the black humus of a forest floor, had seeped down into the network of joint-planes which intersected the flat-lying limestone beds, eating away the soft stone, widening cracks into crannies and crannies into high-arched rooms, rushing along the harder strata and tunneling through the softer ones, eventually bursting out into the open again at the base of a mossy ledge and babbling away over the rocks to join a brook, a river, or the sea.

Millions of years had passed since there were rivers and seas on Mars.

Things change slowly underground. After a cave has died—after the source of moisture which created it have shifted or dried up—it may lie without changing for centuries. A man may set his foot in the clay of its floor and go away, and another man may come a hundred or a thousand or ten thousand years afterward and see his footprint there, as fresh as though it had been made yesterday. A man may write on the ceiling with the smoke of a torch, and if there is still a little life in the cave and moisture in the rock, what he has written will gradually film over with clear stone and last forever. Rock may fall from the ceiling and bury portions of the floor, or seal off some rooms completely. Water may return and wash away what has been written or coat it with slime. But if a cave has died—if water has ceased to flow and its walls and ceiling are dry—things seldom change.

Most of the planet's surface had been desert for more millions of years than anyone has yet estimated. From the mouth of the cave its dunes and stony ridges stretched away like crimson ripples left on a beach after a wave has passed. They were dust rather than sand: red, ferric dust ground ever finer by the action of grain against grain, milling over and over through the centuries. It lay in a deep drift in the alcove and spilled down into the opening of the cave; it carpeted the first twenty-foot passage as with a strip of red velvet, and a little of it passed around the angle in the tunnel into the short cross-passage. Only the very finest powder, well-nigh impalpable, hung in the still air long enough to pass the second bend and reach the big room. Enough had passed to lay a thin, rusty mantle over every horizontal surface in the cave. Even in the black silt at the very back of the cave, where the air never stirred, there was a soft red bloom on the yellow flowstone.

The cave was old. Animals had sheltered in it. There were trails trodden into the dry clay, close to the walls, made before the clay had dried. There was no dust on these places—animals still followed them when they needed to. There was a mass of draggled, shredded stalks and leaves from some desert plant, packed into the cranny behind a fallen rock and used as a nest. There were little piles of excreta, mostly the chitinous shells of insectlike creatures and the indigestible cellulose of certain plants. Under the chimney the ceiling was blackened by smoke, and there were shards of charcoal and burned bone mixed with the dust of the floor. There were places where the clay had been chipped and dug away to give more headroom, or to make a flat place where a bowl could be set down. There were other signs as well.

The *grak* reached the cave a little after dawn. He had been running all night, and as the sun rose he had seen the shadow of the ridge drawn in a long black line across the crimson dunes, and

turned toward it. He ran with the tireless lope of the desert people, his splayed feet sinking only a little way into the soft dust where a man of his weight would have floundered ankle deep.

He was a young male, taller than most of his kind, better muscled and fatter. His fur was sleek and thick, jet black with a pattern of rich brown. The colors in his cheek patches were fresh and bright, and his round black eyes shone like disks of polished coal.

He had been a hunter for less than one season. His tribe was one of the marauding bands which summered in the northern oases, raiding down into the lowlands in winter when the dry plateau became too cold and bare even for their hardy breed. It had fared better than most, for it had had little contact with man. The *grak* carried a knife which he had made for himself out of an eight-inch bar of beryllium copper, taken in his first raid. It was the only human thing he owned. Its hilt was of bone, intricately carved with the clan symbols of his father-line; its burnished blade was honed to a wicked double edge. It was the finest knife any of the desert folk had ever seen, and he had had to fight for it more than once. The desert tribes retained the old skills of metal working which the softer-living pastoral greenlanders had forgotten, and his tribe, the *Begar*, were among the best of the dryland smiths.

He wore the knife tucked into the short kilt of plaited leather which was his only garment. The Old One of his father-line had given it to him on the day he became a hunter and could no longer run naked like a cub. It was soft and pliable with long wear and oiled to a mahogany brown almost as dark and rich as his own chest patterns. There were black stains on it which he knew were blood, for the Old One had been one of the fiercest slayers of his line and the kilt had come down to him from an even greater warrior in his own youth. The very pattern in which the thin strips of *zek* hide were woven had lost its meaning, though it undoubtedly had been and still was of great virtue.

It was cold in the shadow of the ridge, and the *grak*'s long fur fluffed out automatically to provide extra insulation. He looked like a big black owl as he stood scanning the western sky, sniffing the wind with his beaklike nose. There was a tawny band low on the horizon, brightening as the sun rose. He had smelled a storm early in the night, for he had all the uncanny weather-wiseness of his race and was sensitive to every subtle change in the quality of the atmosphere. He had started for the nearest arm of the greenlands, intending to claim the hospitality of the first village he could find, but the storm front was moving faster than he could run. He had seen the ridge only just in time.

He had recognized the place as he approached, though he had never seen it and none of his tribe had visited this part of the desert for many seasons. Such landmarks were part of the education of every dryland cub, and until they had become thoroughly ingrained in his wrinkled young brain he could not hope to pass the hunter's tests and win a hunter's rights. The cave was where he had known it would be, and he clucked softly with satisfaction as he saw the weathered symbol carved in the stone over the opening. The desert people had long ago discarded the art of writing, having no use for it, but the meaning of certain signs had been passed down as a very practical part of their lore. This was a cave which the *grak's* own forefathers had used and marked.

He studied the signs in the dust around the entrance of the cave. He was not the first to seek shelter there. The feathery membranes of his nose unfolded from their horny sheath, recording the faint scents which still hung in the thin air. They confirmed what his eyes had told him. The cave was occupied.

The wind was rising fast. Red dust devils whirled ahead of the advancing wall of cloud. Red plumes were streaming from the summit of every dune. Making the sign of peace-coming, the *grak* stooped and entered the cave. Beyond the second bend in the passage was darkness which not even his owl's eyes, accustomed to the desert nights, could penetrate. However, he did not need to see. The sensitive organs of touch which were buried in the gaudy skin of his cheek patches picked up infinitesimal vibrations in the still air and told him accurately where there were obstacles. His ears were pricked for the slightest sound. His nose picked up a mixture of odors—his own characteristic scent, the dry and slightly musty smell of the cave itself, and the scents of the other creatures with which he would have to share it.

He identified them, one by one. There were four or five small desert creatures which had more to fear from him than he from them. There was one reptilian thing which under other circumstances might be dangerous, and which still might be if the peace were broken. And there was a *zek*.

The carnivore was as big and nearly as intelligent as the tribesman himself. Its kind waged perpetual war on the flocks of the greenland people, and rarely visited the oases, but when one did wander into the desert it was the most dreaded enemy of the dryland tribes. It stole their cubs from beside their very campfires and attacked full-grown hunters with impunity. Its mottled pelt was the choicest prize a hunter could bring back as proof of his prowess. To some of the more barbaric tribes of the north it was more than just a beast—it was His emissary.

A sudden gust from the passage at his back told the *grak* that the storm was breaking. In a matter

of minutes the air would be unbreathable outside. Softly, so as not to arouse the savage beast's suspicions, he began to murmur the ritual of the peace. His fingers were on the hilt of his knife as he began, but as the purring syllables went out into the hollow darkness, his nostrils told him that the fear-odor was diminishing. Somewhere in the dark a horny paw scuffed on the dry clay and there was an instant reek of terror from some of the smaller things, but the *zek* made no sign. It was satisfied to keep the peace. Moving cautiously, the *grak* found a hollow in the wall near the entry and sat down to wait, squatting with his knees tucked up close under his furry belly, the hard rock at his back. The knife he laid on the floor beside his hand where it would be ready if he needed it. For a time his senses remained keyed to fever pitch, but gradually his tenseness eased. They were all *grekka* here—all living things, united in the common battle for existence against a cruel and malignant Nature. They knew the law and the brotherhood, and they would keep the truce as long as the storm lasted. Gradually the nictitating lids slipped across his open eyes and he sank into a half-sleep.

Harrigan blundered into the cave by pure luck. He knew nothing about Mars or its deserts except what the Company put in its handbook, and that was damn little. He was a big man and a strong man, born in the mountains with a more than ordinary tolerance for altitude, and he had had to spend less than a week in the dome before they shifted him to the new post in the eastern Sabaeus. He did what he was told and no more than he was told, laid away his pay every week in anticipation of one almighty spree when they brought him in at the next opposition, and had nothing but contempt for the native Martians. *Grekka* they were called, and that was all he knew or cared about them. To him they looked like animals and they were animals, in spite of the fact that they could talk and build houses and kept herds of peg-legged monstrosities which seemed to serve as cattle. Hell—parrots could talk and ants kept cattle!

Harrigan had been a miner on Earth. He was that here, but he couldn't get used to the idea that plants could be more valuable than all the copper and tungsten and carnotite in the world. The desert and its barren red hills nagged at him, and whenever he could get time off he explored them. The fact that he found only rocks and sand did nothing to extinguish his sullen conviction that there was treasure incalculable here somewhere if only the damned natives would talk or the Company would listen to a man who knew minerals better than the big shots knew the swing of their secretaries hips.

The fact was, of course, as the Company knew very well, that Martian mineral deposits had been exhausted by a native Martian civilization pursuing its inevitable way to an inevitable end at a time when Adam and Eve probably had tails. That the descendants of that civilization were still alive, even on a basis of complete savagery, spoke volumes for the stamina of the native race. Such arguments, however, would have meant less than nothing to a man of Harrigan's type. There were mines on Earth. There were mines on the Moon. Hell—there were mines on Mars!

This time he had overstayed his luck. To him the low yellow wall of cloud on the western horizon was only a distant range of hills which he might some day visit and where he might find wealth enough to set him up in liquor for the rest of his life. He had spent the night in the cab of his sand car, and it was not until the clouds were a sullen precipice towering halfway up the sky that he understood what he was heading into. He swung around and headed back, but by then it was too late.

When the storm hit it was like night. The air was a semisolid mass through which the sand car wallowed blindly with only its instrument board to show where it was going. Dust swiftly clogged the air intake and he had to take out the filters, put on his mask, and hope for the best. It didn't come. In seconds the air inside the cab was a reddish mist and dust was settling like fine red pepper on every exposed surface. The wind seized the squat machine and rocked it like a skiff in a typhoon, but Harrigan could only hang on, peer red-eyed through dust-coated goggles at his dust-covered instruments, and wonder where he was.

The floundering car climbed painfully to the top of a monster dune, pushed its blunt snout out over the steep leading edge, slewed violently around and started down. Harrigan yanked despairingly at the steering levers; they were packed tight with dust and refused to move. He did not see the ridge until the car smashed head on into it. There was a despairing gurgle from the engine, a last clatter of broken bearings, and the car stopped. At once sand began to pile up behind and around it, and Harrigan, picking himself up off the floor of the cab, saw that if he didn't get out fast he would be buried where he sat.

He struggled out on the lee side of the car into a gale that bit into him like an icy knife. He could not see the car when he had taken one step away from it. The dust drove through every seam and patch of his clothes and filtered in around the edges of his mask. It was sucked into his mouth and nose and gritted under his swollen eyelids. It was everywhere, and in no time it would smother him.

The car was lost, though he was probably less than ten feet from it. The wind screamed past

him in unholy glee, tearing at every loose flap on his coat, chilling him to the bone. He took half a dozen blundering steps, knee-deep in the soft dust, stumbled, and came down on his knees at the foot of the cliff. His outthrust hands met solid rock. He struggled forward on his knees and peered at it through crusted goggles. It was limestone, and where there was limestone there might be a cave. Foot by foot he felt his way along the uneven surface of the ridge until suddenly it dropped away in front of him, he staggered forward, and fell on his hands and knees in the entrance of the cave.

His head had clipped the low overhang as he fell and it was a minute or two before he realized where he was. Almost automatically, then, he crawled ahead until his skull rammed hard into another wall. He sat gingerly back on his heels and clawed at his mask. It was completely plugged with dust and utterly useless. He lifted it off his face and took a slow breath. There was dust in the air—plenty of it—but he could breathe.

He groped about him in the pitch dark, found an opening in the right-hand wall, and crawled in. Almost immediately there was another sharp turn and the passage suddenly opened out on either side and left him crouching at the entrance of what he knew must be a good-sized room.

Harrigan knew caves too well to take chances with them. What lay ahead might be a room or it might be a pit dropping to some lower level. He had a feeling that it was big. He found the corner where the left-hand wall swung back, moved up against it, moistened his lips with a thick, dry tongue, and shouted:

"Hoy!"

The echo rattled back at him like gunfire. The place was big, but not too big. What he needed now was water and a light.

He had both. Dust had worked in around the stopper of his canteen until he could barely start the threads, but one last savage twist of his powerful fingers did the trick. There wasn't much left. He let a few drops trickle over his tongue and down his throat, wiped the caked dust off the threads with a finger, and screwed the cap back on. These storms lasted for days sometimes, and it was all the water in the world as far as he was concerned.

Light came next. Harrigan had spent too much time underground to be afraid of the dark, but it was plain common sense to want to see what you were getting into. Harrigan hated mysteries. If he knew what he was facing he could fight his way through anything, but he hated blind fumbling and he hated the dark.

Enough water had evaporated from the open canteen in the minute or two he had had the cap off to appreciably raise the moisture content of the cave—at least for the Martians. To their acute senses it was the equivalent of a heavy fog. A few feet away in the blackness the *grak* awoke with a start. Farther back in the cave one of the small animals stirred eagerly. And the *zek* sneezed.

Harrigan's blundering approach had roused the occupants of the cave, and every eye, ear and nose had been trained on him when he appeared. One rodentlike creature made a panicky rush as it got his scent, only to freeze in terror as it nearly bumped into the *zek*. The peace, for the moment, was suspended—a new factor had entered the situation and a new equilibrium must be reached. They quietly awaited developments.

Harrigan had missed all this preliminary activity in his efforts to find out where he was, rub the dust out of his eyes, and get a few drops of water down his parched gullet. But when the *zek* sneezed, the sudden sound was like an explosion in his ears. In the dead silence which followed he could clearly hear the sound of quiet breathing. It was close to him, and it came from more than one place. He had to have a light!

There should have been a torch in the pocket of his coverall. There wasn't. He had lost it or left it in the car. He had a lighter, though. He ripped feverishly at the zipper of his coverall. It slid open a few inches with a sound like the crackle of lightning and jammed. Sweat dripping from his forehead he sat back on his heels and fumbled for his gun, but there was no movement from the things in the dark. Slowly and softly he slipped two fingers into his pocket and found the lighter. Leveling the gun at the blank blackness in front of him he lifted the lighter above his head and flipped off the cap.

The burst of yellow flame was dazzling. Then he saw their eyes—dozens of little sparks of green and red fire staring out of the dark. As his own eyes adjusted he saw the *grak*, huddled like a woolly black gargoyle in his corner. The Martian's huge round eyes were watching him blankly, his grinning mouth was slightly open over a saw-edged line of teeth, and his pointed ears were spread wide to catch every sound. His beaklike, shining nose and bright red cheek patches gave him the look of a partly plucked owl. He had a wicked-looking knife in his spidery fingers.

Harrigan's gaze flickered around the circle of watching beasts. He knew nothing of Martian animals, except for the few domesticated creatures the greenlanders kept, and they made a weird assortment. They were mostly small, ratty things with big eyes and feathery antennae in place of noses. Some of them were furred and some had horny or scaly armor. All of them were variously decorated with fantastic collections of colored splotches, crinkled horns, and faceted spines

which presumably were attractive to themselves or their mates. At the far end of the cave, curled up in a bed of dry grass, was a lean splotched thing almost as big as the little native which stared at him with malevolent red eyes set close together over a grinning, crocodilian snout. As he eyed it, it yawned hideously and dropped its head on its crossed forepaws—paws like naked, taloned hands. It narrowed its eyes to crimson slits and studied him insolently from under the pallid lids. It looked nasty, and his fingers closed purposefully over the butt of his gun.

The *grak's* cackle of protest stopped him. The only word he could make out was *bella*—peace. He knew that because he had a woman named Bella back in New York, or he had had before he signed on with the Company. Besides, it was part of the spiel you were supposed to rattle off every time you talked to one of the damned little rats. It was all the Martian he knew, so he spat it out, keeping one eye on the other beast.

This was the first man the *grak* had ever seen. It was a monstrous-looking thing, wrapped in layer after layer of finely plaited fabric which must have taken his mates many years to weave, even if their clumsy fingers were as deft as those of the greenlanders, who occasionally did such things. A thrilling philosophical problem was teasing the *grak's* young brain. Was or was not this man of the *grekka?*

To a native Martian the term *grekka* means literally "living things." Any creature native to the planet is a *grak;* all of them, separately or collectively, are *grekka.* The first men to come in contact with the native race heard the word used to designate the Martians themselves and assumed that it was the Martian equivalent of "men." Graziani, of course, as an anthropologist of note, immediately realized the truth of the matter—the situation is duplicated again and again among human aborigines—but the label stuck. Nor did that matter too much, for *grekka* did include the natives and made perfectly good sense when it was used as men proceeded to use it. What did matter was that the word was also the key to the whole elaborate structure of Martian psychology.

Millions of years of unceasing struggle with the forces of an inclement environment on a swiftly maturing and rapidly dying planet have ingrained in the native Martian race, greenlanders and drylanders alike, the fundamental concept that Nature is their undying enemy. Life for them is a bitter fight against overwhelming odds, with an invisible foe who will use every possible means to grind out the little spark of ego in each round, furry Martian skull. You find it in the oldest legends: always the wily native hero is outwitting —there is no other word for it—the evil purposes of the personified, malignant Universe.

Grekka is the ultimate expression of this grim philosophy. In the battle for life all living things —all *grekka*—are brothers. No Martian would ever dispute the theory of evolution—it is the very core of his existence that all beasts are brothers. That is a somewhat oversimplified statement of the fact, for from there on *grekka* becomes entangled in the most elaborate maze of qualifications and exceptions which a once highly civilized race has been able to devise over a period of millions of years. Your native Martian, drylander or greenlander, will help his brother beast whenever the latter is clearly losing out in a battle with Nature, but there are certain things which the individual is supposed to be able to do for himself if he is not to give unholy satisfaction to Him—the Great Evil One—the personification of the universal doom which pours unending misfortune on all *grekka* alike.

The distinction is one of those things which no logician will ever be able to work out. It is one thing for the desert tribes and something else for the lowlanders. The *Begar* will draw the line at something which is a sacred duty of every *Gorub,* in spite of the fact that the two tribes have lived side by side on a more or less friendly basis for generations. One clan—even one father-line—may and must act in ways which no other clan on Mars may duplicate without eternally losing a varying number of points in its game with Him and His aids.

What puzzled the young *grak* of the cave was whether man—specifically Harrigan—was *grekka.* If he was, he was an innate member of the brotherhood of living things and subject to its laws. If he wasn't, then he could only be a personification or extension of the inimical First Principle Himself, and hence an inherent enemy. Since the time of Graziani and the Felmming expedition every Martian native, individual by individual and tribe by tribe, has had to make this decision for himself, and by it govern his further relations with humanity. The *Begar* had had too little contact with mankind to have needed to make such a decision as a tribe. Now the young *grak* decided to reserve judgment, keep his eyes open, and let the man prove himself by his further actions.

Harrigan, of course, knew absolutely nothing of all this. It would probably not have mattered if he had. What some damned animal thought about the Universe was nothing to him.

For a moment there had been death in the air. Now the tension was vanishing. The smaller animals were settling down again, the little *grak* grinning and nodding as he squatted down in the corner. Only the *zek's* slitted eyes were still studying him with cold indifference. The damned

nightmare was curled up in the one place in the cave where a man could stand up! Harrigan gave it eye for eye, and all the little furry and scaly creatures lifted their heads and watched them while the *grak* blinked worriedly. They could all smell the hostility between the two. The *zek* yawned again, showing an evil double line of knife-edged fangs and a leprous white gullet, and flexed the mighty muscles which lay like slabs of molded steel across its massive shoulders. Harrigan sat glumly down where he was, his back against the cold stone, his gun on the floor beside him, the lighter wedged into a crack in the rock between his feet.

Outside the storm was at its height. The far-off screaming of the wind echoed and re-echoed in the big room. Puffs of red dust drifted in out of the darkness, and the flame of the lighter wavered and danced. In the occasional lulls, the only sound in the cave was their steady breathing. Every eye, Harrigan knew, was on him. He was the intruder here, and they were wary of him. Let 'em be! A man was something to *be* afraid of on this damned little dried-up world!

He glowered back at them, making up malicious fantasies about their probable habits. There were plenty of fancy stories going the rounds about how these Martians went at things. He grinned sardonically at the little *grak* as he recalled one particularly outrageous libel. The *grak* smiled reassuringly back at him. This man was a hideous travesty of a thing, but he was keeping the peace.

Harrigan sized up the cave. It wasn't a bad hole as caves went. It was dry, the angle in the passage kept the dust out, and it was big enough so a man could stretch. With a fire and water he could last as long as the storm would.

There had been a fire, he noticed, under the chimney at the far end of the cave. There was soot on the ceiling, and the rock had the crumbled look of burned limestone. It was too close to the big beast for comfort, though. That was a wicked-looking brute if there ever was one. Better leave him be—but if he tried to start anything, James Aloysius Harrigan would show him who was tough!

A gust stronger than any that had come before bent the thin flame of the lighter far over, drawing it out into a feeble yellow thread. Harrigan bent quickly and sheltered it with his cupped palms. It seemed smaller and duller than when he had first lit it. He picked up the lighter and shook it close to his ear. It was almost dry! He snapped down the cap.

The darkness which fell was stifling. The invisible walls of the cave seemed to be closing in on him, compressing the thin air, making it hard to breathe. The dust got into his nose and throat. It had a dry metallic taste. Iron in it. It shriveled the membranes of his throat like alum. He cleared

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his throat noisily and ran his tongue over his thick lips. What he needed was a drink. Just a couple of drops. He unscrewed the canteen and lifted it to his lips.

Somewhere in the blackness something moved. It made only the very smallest sound—the tick of a claw on the rock—but he heard it. Instantly he was on the alert. So that was their game! Well, let 'em come! They were as blind as he was in this hole, and he had yet to see the day when any animal could outsmart him!

He set the canteen carefully down behind a block of stone. It would be safer there if there was a scrap, and it might hit against something and give him away if he carried it. Shifting his gun to his left hand, he began cautiously to work his way along the wall, stopping every few inches to listen. He could hear nothing but the rhythmic, ghostly whisper on the creatures' breathing. Whatever it was that had moved, it was quiet now.

His fingers found the first of the slabs of fallen limestone which lay half buried in the clay along the right-hand wall. They reached almost to the chimney, but about fifteen feet from where he had been sitting there was a break in the line, and the wall dropped back into a shallow alcove no more than two feet high. In there he would have solid rock on all sides of him, and he would be directly opposite the pile of dried weeds in which the *zek* was lying. He would have a clear shot at the ugly brute between two of the fallen blocks.

His groping hand came down on something cold and scaly that wriggled hastily away under the rocks. There was an answering squeal of terror and a patter of scampering feet as panic-stricken little creatures scattered in front of him. Something as heavy as a cat landed on his back and clung there, chattering madly. He batted at it and knocked it to the floor. Then, only a few feet ahead in the darkness, he heard the stealthy click of claw on stone again. The *zek!*

He had to have light! It was suicide to face that monster in pitch blackness! He had slipped the lighter back into the outside pocket of his coverall. He fumbled for it. It was gone!

The panic went out of Harrigan in a flash. He sat back on his heels and curled his fingers lovingly around the butt of his gun. The tougher things got, the better he liked them. The lighter must have dropped out of his open pocket; he could find it when he needed it by going back over the ground he had just covered. It wasn't lost. But he didn't need it. The dark was his protection, not his enemy. They couldn't see him in the dark.

He dropped back on all fours. Everything was quiet again. He'd hear them if they tried anything. He was almost at the alcove, and then they'd have to blast to get at him. He could pick 'em off one by one if they tried to get in.

The clay was hard as brick and full of little chunks of broken stone that gouged at his knees, even through the heavy suit. The roof was lower, too; he had to get down on his elbows and hitch along, almost flat on his face.

His heart was thumping like mad. He was working too hard in this thin air. He rolled over on his side, his back against one of the big blocks, and stared into the blackness. Another few feet and he could lie down and wait for them. He needed time out. He had to have a clear head. He cursed his stupidity in not bringing an oxygen flask from the car. One shot of that stuff and he'd be ready to take 'em all on at once, barehanded!

As he started on again something tinkled on the stone beside him. He groped for it: it was the lighter. It had been in his back pocket. Damn fool—letting the darkness rattle him! Animals were all afraid of fire. He could smoke 'em out any time he wanted to. He was boss of this cave! A grin of satisfaction spread over his grimy face as he shuffled along on knees and elbows through the dust.

One big slab almost blocked the hole he was looking for. It was a tight squeeze, but he wriggled through and found plenty of room behind it. He felt for the crack between the blocks that was opposite the nest, slid his gun cautiously into position, and flashed the lighter. Now!

The nest was empty.

With a curse Harrigan rolled to the other opening. The flame of the lighter showed him the far end of the cave—the *grak* crouching wide-eyed in his niche—the black arch of the entrance—and the *zek!*

The thing had slipped past him in the dark. It stood where he had been sitting a moment ago, by the entrance. It stared back at him over its shoulder—a hideous thing like a giant reptile-snouted weasel, mottled with leprous gray. It grinned at him, its red eyes mocking, then stretched out a handlike paw and picked up his canteen!

Harrigan's first shots spattered against the rock above the monster's head; the light blinded him. His next clipped through the coarse mane on the back of its thick neck. His last was fired point-blank into its snarling face. Then the lighter went spinning away across the floor and talons like steel clamps closed on his arm.

The rocks saved him then. The thing had him by the arm, but his body was protected. He still had the gun; he twisted around in the beast's grim grasp and emptied it into the darkness. Its grip loosened and he snatched his arm free. It was bleeding where the *zek's* claws had bitten into the

flesh. Then, through the crack on his right, he saw a sheet of white flame go up as the lighter touched the powder-dry mass of weeds in the beast's nest.

The cave was lit up as bright as day. Harrigan saw the *zek*, blood streaming from a ragged wound in its broad chest, its face a bloody mask of fury. One shot had plowed a long furrow across the side of his head. It gathered its powerful hind legs under it, seized a corner of the great block which barred the opening with paws like human hands, and pulled. The muscles stood out in knotted ropes on its arms and shoulders as it worried at the massive stone. Then the packed clay at its base crumbled and the great block slowly tipped. The way was open. His sanctuary had become a trap.

There was one way out. Harrigan took it. Desperately he lunged forward, out of the cranny straight into the thing's arms. He clamped both hands over its narrow lower jaw and forced its slavering snout straight back with all the power of his own broad back. It rose on its haunches, hugging him to it, then toppled over, dragging him with it into the open, raking at him with its cruel hind claws. He set his jaw and felt his arms stiffen and straighten as the evil head was driven back—back. As through a red mist he saw the *grak's* owl eyes staring at him over the monster's shoulder—saw the coppery gleam of firelight on a shining knife. He felt the *zek* shudder as the keen blade was driven home in its back. It began to cough—great racking coughs that shook its whole frame. Its arms tightened convulsively about him and its claws clenched in his back as the copper knife drove home again and again. Then, slowly, they began to loosen. The beast was dead.

The burning weeds had dimmed to a dull flicker. The dust that had been stirred up in their struggle hung like a red veil in the air. Harrigan lay staring up through it at the little native, sucking the thin air painfully into his tortured lungs. The damned little rat had saved his life! He wiped the blood and dust off his face with his sleeve and got slowly to his feet. He had to stoop to clear the ceiling. That knife—that was a man's weapon. Wonder where the *grak* got it—

He took one step toward the *grak*. Before he could take another the knife went smoothly into his belly, just under the breastbone, driving upward to the heart.

Squatting in the darkness, listening to the distant murmur of the storm, the *grak* wondered what would have happened in the cave if the man had not come there. The *zek* had been a treacherous ally: sooner or later it might have broken the peace. Once its blood-rage had been aroused it had, of course, been necessary to kill it. But if the man had not come that necessity might have been averted.

The man had been very clever. The *grak* had been almost certain that he was what he pretended to be. But as always there was one thing—one very little thing—to betray him. He did not know the law of water.

In every doubtful situation, the *grak* reflected smugly, there was some trivial matter in which the Source of Evil or His emissaries would reveal themselves. Some one thing in which the true *grak* was clearly distinguishable from the forces of Nature against which he must forever fight. One must be quick to see such discrepancies—and quick to act on them.

The matter of water lay at the very root of the law by which all *grekka*—all living things—existed. It was the thing which all must have, which none, under the law, could withhold from another. Without it there could be no life. With it every living thing was given strength to battle on against the eternal foe.

The man had brought water to the cave. Under the law all *grekka* must share in it according to their need. But when the *zek* had gone to take its share, the man had tried to kill it. By that small thing he revealed himself—no *grak*, but one of His evil things. So he had died. So, once more, was victory won for the brotherhood of living things against the Universe.

He would make a song about this thing, and sing it by the fires of his tribe. He would cut a sign in the stone over the entrance of the cave, after the storm was over, so that others who came there would know of it. And the cave itself, where his forefathers had come and lit their fires, would keep the bodies of the *zek* and the man thus, side by side, as witness forever.

THE END.

But—

Here and now it's not water but money

that's needed. Are you doing your share?

TEN PERCENT EVERY PAY DAY TO WAR BONDS

GET OUT AND GET UNDER

By L. Sprague de Camp

● Second of Two Parts. Concerning the evolution of the panzer division and bringing the Babylonian war-chariot up to medieval and modern times. The tank was not an original idea—it was simply the final perfection of a long-sought method.

In the first installment we followed the five-thousand-year struggle of the fighting-vehicle inventors up to the point where they were finally stymied by the equations connecting fire power, weight, and power of human and animal muscle. (The sail-car inventors did no better.)

For over two centuries the art lay dormant. Then, about 1770, one Nicholas Cugnot had the obvious—to us—idea: why not use this new steam engine, that is used to pump the water out of mines, on a carriage? Perhaps it would haul heavier loads than the largest team of horses; perhaps the heaviest artillery. Then the enemies of our beautiful France—*pouf!* Our dear king seems to be mechanically inclined, even if a bit stupid otherwise—

He built it, and it ran. But barely. It had a massive timber frame and one big front wheel, on which was mounted furnace, boiler, and engine. Wheel and power plant were turned as a unit by a kind of windlass, like that on modern road rollers. Cugnot demonstrated his brain child in Paris. True, it groaned along at two and one half miles an hour, and had to stop every hundred feet to get up steam. But it marched. That was the main thing—

Then Cugnot found he was headed straight for a wall, and all his frantic straining at the windlass would not get it turned in time. *Crash!* To the Bastille with you, Monsieur Cugnot, for disorderly conduct; when you get out may you think hard before you again destroy the property and risk the lives of honest citizens with your absurd machines.

Fortunately the inventors keep at it, even when—as is often the case—the idea is unsound. Other steam carriages followed, evolving parallel with the infant steamship. Some steam carriages actually ran commercially in England during the 1820s until the stagecoach companies had them legislated out of business. The inventors then put their machines on rails, killing two birds: the antisteam-coach laws and the terrific rolling friction offered by unpaved roads. And in another decade the web of rails was spreading like frost lines across the maps of Europe and America.

Here, at first sight, was the solution to the fighting vehicle problem:

6. *The Armored Train.* This weapon was suggested as early as 1826, and put into practice in 1848. This was at the siege of Vienna. Some enterprising commander mounted a small cannon on a flat car and protected it with an improvised armor of railroad iron. The resulting armored train puffed up and down the track and banged away and departed without leaving much impress on history.

At second sight the armored train was seen to have one horrid shortcoming: it would go only where the track went, and then only as long as the track was intact. Against Arabs or American Indians it might work, but more civilized peoples would immediately cut the line with shell, mine, or crowbar, and then where are you?

So during the American Civil and Franco-Prussian wars guns were mounted on railroad cars, true, but only as railroad batteries: unarmored, built to shell the enemy from a safe distance behind the front lines.

But if a war finds you with a lot of rolling stock, guns, and boiler plate, and trackage that runs into disputed and hostile territory, it seems a shame not to assemble this combination into armored trains from which you can get *some* use, just as navies in wartime warm over merchantmen into auxiliary cruisers—pretty terrible things by ideal standards, but better than nothing.

Thus the Boer War of 1899 found the British in South Africa. They immediately fitted out ten armored trains. One set out for threatened Mafeking, but was caught by the Boers at Kraaipan and shelled into junk. Another went galloping out of Estcourt to reconnoiter, but was operated so rashly that it was presently derailed and most of the crew captured. The British found that trains that depended on rifles and machine guns only for defense, or that tried to operate without support from regular forces, were practically useless. Also, the trains were first assigned to the

military commanders in the various districts, and at the first word of Boers these would dash out onto the main line regardless of schedules, producing some wonderful traffic jams.

But by the end of the war things were different. The number of trains had been raised to nineteen; they were under the command of one officer who was also a railway expert, Captain Nanton, who had operated his own armored train with such aggressiveness as to capture most of the ammunition of Boer Commandant De Wet at Baartman Siding. At the start of the war the Boers had blown up the tracks with great frequency, but by 1901 they had lost most of their artillery, and a system of blockhouses and frequent patrols by the trains made the planting of mines extremely hazardous. The trains mostly carried cannon; one of them mounted a six-incher, which, with the help of an observation balloon, shelled the astonished Boers at Fourteen Streams from a distance of eleven thousand yards.

In May of 1900 Colonel Robert Baden-Powell—the Boy Scouts' Baden-Powell, who recently died at a vast age—was put in charge of the defense of Mafeking. He had an armored train to help, and a limited stretch of track to operate it on; the Boers had cut the track north and south of the town. The Boers ill-advisedly settled down to make a leisurely seige of it, their commander, Cronje, having been forbidden by President Kruger to incur losses by making a direct attack. Baden-Powell ran his train up and down, shooting at such Boers as showed themselves; on one of these excursions it got into a brisk fight and had to be extricated by the infantry.

The wily Baden-Powell devised all sorts of remarkable improvisations during the siege, such as a homemade eighteen-pounder howitzer and an acetylene searchlight. At the end of the year he ordered an attack on the small Boer fort on Game Tree Hill, in which assault the train was to take part. But the Boers got wind of the attack and damaged the track so that the train could not get close enough to the fort to use its guns effectively, and the Boers stopped the British attack with heavy and deadly rifle fire. Mafeking was relieved, in dire distress, the following May.

In World War I armored trains were similarly improvised and used in much the same manner. On the night of September 11, 1915, Captain Scheichelbauer, commanding Austrian Armored Train No. II, set out from Gorz—now Gorizia—to destroy the Italian positions around the Babinrub Tunnel several miles to the north. He took along infantry to help drive off the Italian soldiery and a repair crew to fix the track. The engineer in his excitement ran the lead car onto a section of damaged track, but the repair crew somehow got the car back on the rails. The Austrians

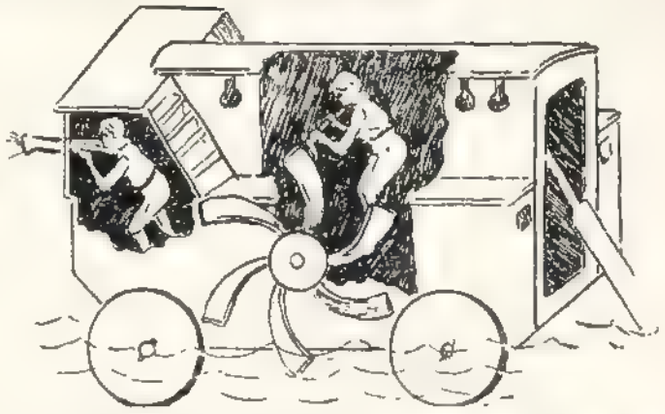

Fig. 1. One of the early post-gunpowder attempts to produce an effective armored car—Ramelli's Amphibious Car of 1588.

fought their way up to the tunnel, with the crew repairing track as they advanced and the train's guns knocking out the Italian machine guns; blew up the tunnel, and retired in broad daylight under shell fire. The Italians made several hits but failed to stop the train.

The Russians early fell in love with the armored train, perhaps because of its horrendous appearance, and both sides used them to good advantage in the Civil War of 1917-1920. Most of the campaigns of this war were fought along the scanty railroad lines. Since Russian roads were either bad or nonexistent, and there were little artillery and no airplanes available, the trains were about as effective as they are ever likely to be.

In 1919 the scoundrelly White general, Grigori Semyonof[1], controlled five armored cars in eastern Siberia, and found them most useful in terrorizing the countryside. (Semyonof was subsidized by the Japanese and had some American and many British supporters despite his atrocities. This greatly distressed the commanders of the American army in Siberia, who were trying with doubtful success to stay neutral in the civil war, loathed Semyonof, and had no clear idea of why they were there in the first place.) This fearsome brigand sent his five trains west to help Kolchak's army at Irkutsk. The last of these, named *Destroyer* and commanded by a General Bogomoletz, got into a dispute with the Americans through whose zone it passed; the Russians had decided it would be fun to shoot a station master. The Americans rescued the unfortunate civilian, and Bogomoletz departed muttering into the night.

At Posolskaya there were thirty-one American soldiers under Lieutenant Paul Kendall, sleeping in box cars on a siding in forty-below weather. The *Destroyer* stopped beside the siding and opened fire on the Americans, killing two and wounding one. The Americans turned out in record time, returned the fire and damaged the

[1]Also spelled Semenov, Semeonoff, et cetera; pron. *sem-yawn-off.*

engine with grenades. The *Destroyer* crawled off about three miles, at which point the Americans caught up with it and captured it entire, bagging forty-eight men—five having been killed—six officers and the general. Unfortunately, Kendall turned his prisoners over to his superior, Colonel Morrow, who was compelled by political exigencies to let them go. This result led the commander in chief, General Graves, to opine that while Kendall's action had been the soldierly and correct one, he couldn't help regretting "that Lieutenant Kendall, who first got hold of Bogomoletz, did not hang him to a telegraph pole."

The previous year one of Semyonof's trains had fought another armored train commanded by the Red general Lazo. They whanged away until each made a hit on the other, whereupon they called off the fight by mutual consent and retired to their respective homes for repairs.

A British interventionist force in Turkestan came up against a similar situation: they and the

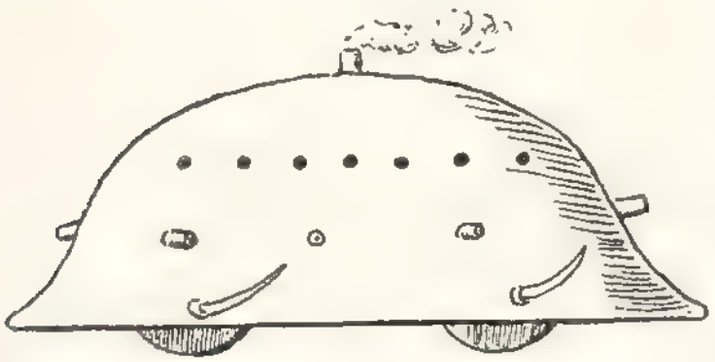

Fig. 2. Another would-be gun-proof armored car—Cowen's battle-car of 1855. Mechanical power sources were available by this time, but not sufficient power-per-pound.

Reds each had an armored train; there was one track stretching straight over the horizon fore and aft. Away from the track the desert conditions prohibited wandering. Moreover, these trains were both so assembled that neither one could fire dead ahead. The British tried a flank march through the desert but were repulsed with loss. Thereafter they sat; when one train retreated the other advanced, and vice versa. For all anyone knows the trains might have been doing their tango yet had not the British been withdrawn.

Armored trains are still being used by the Russians; the Japanese are probably getting good use out of their Sumida armored motor rail car, which can be converted into an ordinary armored car by putting tires on the wheels. This form of weapon will probably continue to appear sporadically for some time, where circumstances are favorable. But the perfection of other and much more versatile fighting vehicles, land and air, points to its gradual decline.

7. The Armored Car. Experimentation with free-wheel power vehicles—free-wheel meaning nonrail—continued sporadically throughout the nineteenth century, with attempts to adapt these machines to military use along three lines: a slow unarmored vehicle for military transport, a fast, unarmored vehicle for scouting, and a slow, armored vehicle for fighting.

The first of these came first, in the form of the big-wheeled steam tractor originally called a "road locomotive." Many readers will remember when such machines were in common use for pulling threshers and for road-construction work; probably there are some still in the possession of road contractors. They hauled strings of supply wagons for the British Army in the Crimean and Boer wars, but were something less than a screaming success.

The big-wheel theory was that if you made the diameter of the wheels sufficiently great you could overcome the rolling friction furnished by the roughness of the Earth's surface. A speciously convincing theory; but in practice, while the bearing surface went up, the weight went up faster and so did the rolling friction. When the road locomotives stayed on the roads, they ruined the roads; when they left the roads they stuck themselves fast.

Perhaps the first inventor to put a machine gun on a motor vehicle was Major R. P. Davidson of the Illinois National Guard, who about 1900 mounted a Colt on a light Duryea proto-automobile. Every few years thereafter Major Davidson produced a new machine-gun car, clear down to 1915. They were tested; they worked. The War Department said, "How interesting," and let it go at that. Americans hold something of a record for pioneering in new military instruments and techniques, then dropping them for want of money or interest while others perfect them. Witness the history of the airplane, the submarine, the machine gun, parachute troops, and so on.

In this case the "other" was Paul Daimler, German, son of the automobile pioneer. In 1903, by which time the automobile was really an automobile rather than a horseless carriage, Daimler built an armored car with a four-wheel drive and a revolving machine-gun turret. The generals saw, hemmed and hawed; improved models appeared during the following years. The European armies provided themselves with one or two; then several hundred, despite the fact that the machines were built on commercial chassis too light for the weight, and were by modern standards outrageously underpowered.

The American army in 1909 experimented with a couple of improvised motor guns: one-pounder cannon mounted on trucks. History: almost identical with that of the machine-gun car.

The average or common-sense viewpoint con-

cerning military motorization was illustrated in 1907 by an Italian military engineer, Major Andrea Maggiorotti, in an article in *L'Automobile*. He wrote: "The automobile, or more strictly speaking, the gasoline motor, has brought forth a school of admirers who wish to use it in the army in a strange manner; they call themselves believers in the *mechanical battle*. According to them . . . many a future warrior will use ironclad automobiles or dirigible balloons in his battles, which will be struggles between metallic carriages or bags of wind, resulting in disemboweled iron monsters or silken corpses. . . . Fortunately, there is no indication that the wanderings of this school from the dictates of common sense are obtaining favor in the military organizations of the various nations."

Major Maggiorotti was no mere back-to-the-longbow reactionary; he went on to describe and strongly advocate the use of motor vehicles for scouting, dispatch-running, and supply transport. It just happened that in this case the moderate major was wrong and the enthusiasts right. If they always were, the improvement of the art of war would be simple: hire the most original amateur you can find and let him carry out the wildest plans he can conceive, even if it means arming your soldiers with megaphones and copies of the works of Mohandas K. Gandhi.

But with military invention as with prophecy: we remember the successes, and forget such things as Lieutenant Hunter's experimental U. S. S. *Union*. This steam warship of 1839 had paddle wheels set in recesses in her sides on *vertical* shafts; would do all of three m.p.h. in smooth water with a favoring wind.

Often the innovation is impractical in itself, but contains the germ of a sound idea. Example: in 1855 James Cowen had proposed a turtle-back armored steam car with fourteen-pounder cannon and whirling scythe blades; rejected by Lord Palmerston, not as impractical—which it undoubtedly was—but as too barbarous.

The armored car got a tryout in the Italian conquest and pacification of Tripoli, 1911-1913. No details; but this campaign also saw the first military use of the airplane. Italian chicken coops *put-putted* over the heads of the enemy, and the pilots tossed little bombs by hand, while the Turks canted up field guns in a futile endeavor to hit back.

The outbreak of World War I saw a burst of armored-car activity on the Western Front. The Germans led with about a thousand machines, which they used in a tentative manner as auxiliaries to cavalry. They also had a number of motorized Jaeger—sharpshooter—battalions.

Typical incident: In October, 1914, Belgian armored car No. 7, Lieutenant Thiery commanding, encountered a road block of peasant carts; butted through it and with his machine gun drove the crew of a German battery from their guns with loss. Thiery was about to destroy the guns when Belgian artillery opened fire on the car by mistake. The car went back and straightened out the error, then returned to the German position to find that the Germans had rebuilt the barricade and mounted a machine gun on it. In the ensuing fight Thiery and one of his gunners were wounded, though they knocked out the German machine gun. The car's remaining gunner could not drive; Thiery managed to crawl back into the driver's seat and bring the car out of action.

Multiply that incident, with variations; add innumerable mechanical troubles and tire blowouts, and you have the history of armored cars in action during this period. Commodore Sueter, Director of the Air Department of the British Admiralty, set up a naval air base at Ostend, later moved to Dunkirk. To protect the base Sueter commandeered all the Rolls-Royces in England and put armored-car bodies on them. These cars skirmished with German cavalry and made dashes into hostile territory to rescue forced-down aviators. They were operated by Royal Naval Air Service personnel, which is how the British Navy got into the incongruous business of developing armored land vehicles.

Eventually the establishment expanded to twenty-four armored cars, fifty-eight motorcycles and six armored motor guns; quite an embryo armored division. But before it could be used thus, the front jelled, and the development of continuous trench lines diminished the effectiveness of the cars. The vehicles and their crews were withdrawn to England; some of the armored cars were sent to Egypt, the Middle

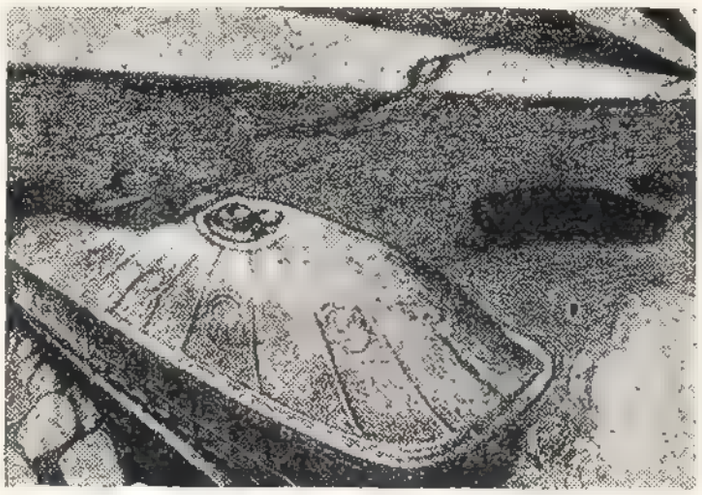

Fig. 3. But the essentials for successful armored cars were at hand; shot-proof steel and mechanical power. And the dreamers were at work. This illustration from H. G. Wells' story "The Land Ironclads" (1903) was captioned: "It had the effect of a large and clumsy black insect."

East, and Russia, where they wrought great exploits and suffered all kinds of misfortunes throughout the war.

Squadron 20 remained in England experimenting with portable bridges, caterpillar tracks, and other expedients to enable cars and gun tractors to cross ditches. They did not have an easy time. The Fourth Sea Lord, Commodore Lambert, had no use for this work. He kept asking Sueter what his "damned idlers" were doing; and described the antiaircraft searchlight, another of

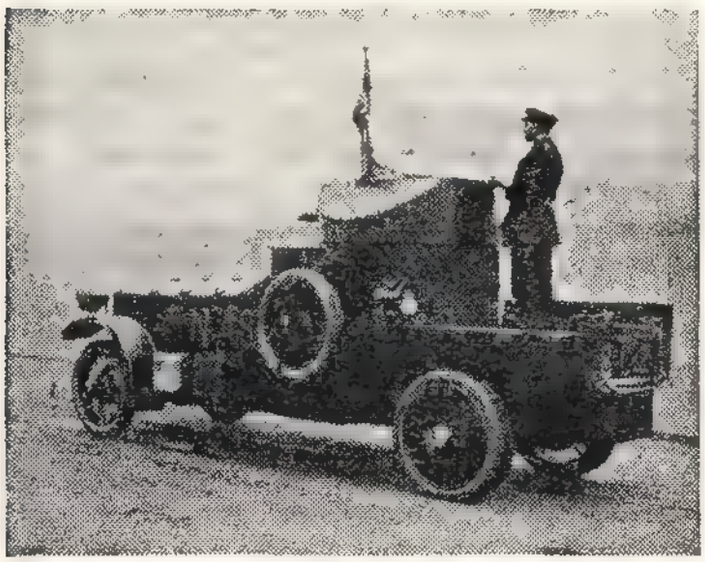

Fig. 4. And in December, 1914, the armored car had arrived. Not yet the full-fledged go-anywhere vehicle, this armor-plated Rolls-Royce was constructed by the British Royal Naval Air Service.

Sueter's brain children, as "the most foolish contrivance it is possible to imagine."

Armored cars were originally developed and used as auxiliaries to cavalry, which did not work too well, the offensive and defensive powers and the mobility of the cars being all different from those of the horsemen. The idea of using a division of armored vehicles as an independent striking force does not seem to have been even thought of. Yet it happened, though the lesson was not appreciated for a long time. In 1916 the Duke of Westminster led a force of nine armored cars and two civilian automobiles against an army of five thousand Senussi Arabs, stiffened by Turkish artillery and German machine gunners, in Libya. The British cars routed the foe with great slaughter, captured all their guns and spare ammunition, and rescued the crew of a British ship whom the Arabs were holding for ransom.

Though the pioneer work in the operation of armored divisions was done on the Southern and Eastern Fronts of World War I with armored cars, and though these machines are still very useful, they were and are largely road-bound except in desert country. They thus suffer from the main shortcomings of the armored train, though in lesser degree. The definite answer to the fighting-vehicle problem was furnished by

8. *The Tank.* With the closing down of the trench deadlock in the later months of 1914, the dreadful business of trying to fight the gun with its target began. Since the German Army was the best provided with machine guns, and the Allied armies did most of the attacking, the latter suffered most. To clear away the barbed wire and machine guns, the Allied generals resorted to heavier and heavier artillery bombardments. These destroyed a few machine guns, but merely stirred up the wire without removing it, and so pocked the ground with holes that advance became harder than ever. When the barrage lifted the defenders still had time to rush out of their dugouts, man their machine guns and mow down the attackers. This superiority of the defense, due, like the similar medieval period, to a passing phase in the development of military technique, adequately explains the "defense complex" of the post-war democracies without dragging in any alleged "democratic degeneracy."

Obviously, ordinary wheels were hopeless as a means of negotiating such tortured terrain. There had been other ideas: machines with legs, caterpillar tracks—patented by Edgeworth in England in 1770—huge rolling spheres and cylinders, and Diplock's "Pedrail," a steam tractor built about 1900 with swiveled disk-shaped feet around the periphery of the drivers.

The Pedrail never amounted to much, but is memorable for the use made of it by the Grand Old Man of science-fiction, H. G. Wells. In *The Strand Magazine* for December, 1903, which also ran the third installment of "The Return of Sherlock Holmes: The Adventure of the Dancing Men," Wells had a short story called "The Land Ironclads." The story is written from the viewpoint of a war correspondent covering a battle in a vaguely South African locale. The side to which he is accredited is overwhelmed in a night attack by a swarm of huge fighting vehicles resembling box cars a hundred feet long, steam-driven, rolling forward on pedrail wheels and mowing down the enemy with numerous automatic rifles aimed by periscopic sights. Needless to say, the losers are very bitter about the use of such unfair machines, which will be the ruination of the grand old art of war.

In October, 1914, the British Army's Official Correspondent, Colonel Swinton of the Royal Engineers, conceived the idea of an armored vehicle on caterpillar tracks, big enough to squash barbed wire and cross trenches, and armed with light cannon to silence machine guns. Like Wells, Swinton had written a futuristic war story with armored vehicles overwhelming everything. As the

armored car was originally developed purely as an auxiliary to cavalry, the tank was originally developed purely as an auxiliary to infantry.

Colonel Swinton put his idea to various generals and got the brush-off; but one of his memoranda came to the notice of Winston Churchill, then First Lord of the Admiralty. Churchill set up a Landships Committee with Sir Eustace H. Tennyson d'Eyncourt, Director of Naval Construction, as chairman, and Lieutenant Albert Stern, ex-banker, as secretary. Commodore Sueter's armored-car boys were to do the dirty work of experimentation under the committee's supervision.

From this point the story becomes complicated. This idea is suggested; that one is tried; committees merge and split and change shape like amoebae. At length a practical machine was built, called variously H. M. S. *Centipede*, "Mother," and "Big Willie"—"Little Willie" being an unsuccessful predecessor. The actual design of this machine was the work of Lieutenant W. G. Wilson of the Royal Naval Air Service, and William Tritton, a civilian engineer of William Foster & Co., a machinery company of Lincoln founded in 1854 by a chin-whiskered flour miller.

One of the proposals considered by the Landships Committee was Flight Commander Hetherington's land battleship, a machine of true science-fiction dimensions. It consisted of a triangular frame mounted on three enormous wheels forty feet in diameter and thirteen feet across the treads. It was to mount three turrets each with a pair of four-inch guns, be driven by an eight-hundred-horsepower Diesel, have three-inch armor, and scale one hundred feet long, eighty feet wide, and forty-six feet high. Hetherington estimated a weight of three hundred tons; d'Eyncourt calculated one thousand, and the proposal was dropped with a thud. This is probably just as well, for while tanks of one hundred sixty-five tons have been laid down, machines of over one hundred tons have not proved very practical.

After the war a Royal Commission considered the claims of various tank inventors: Swinton, Sueter, Hetherington, d'Eyncourt, Tritton, Wilson; Boothby and Macfie of the R. N. A. S.; Nesfield, Crompton, and Le Gros—civilian engineers—and a Mr. de Mole, whose design had been buried in the files of the War Office since 1912.

The Commission awarded fifteen thousand pounds for Tritton and Wilson to split between them; one thousand pounds each to Swinton and d'Eyncourt; five hundred pounds each to Macfie and Nesfield. The rest got pats on the back, and some of them set up a fearful outcry of "We was robbed." The Commission followed the tricky rule of not giving awards for work done in line of duty, which put the claimants in the awkward position of implying that they had been neglecting their proper jobs.

Those who want to study this development more closely will find it well documented, for many of the people involved wrote books, some of them with diagrams showing who suggested what to whom, and when.[2]

"Mother" ran her trials in January and February of 1916, and one hundred fifty more like her were ordered. This Mark I, as the model was officially designated, was a thirty-one-ton machine with a rhomboidal profile, the tracks being carried clear round the body. This feature was then considered vital to the tank's success in climbing out of holes. So it may have been with the feeble engine power—a one-hundred-five-hp. Daimler—available. But after the war it was watered down considerably. There was also a pair of wheels trailing behind to increase trench-crossing ability and help steering; these were soon abandoned. A projecting sponson on each side housed a six-pounder naval gun, and there were four machine guns as well. The machine did three point seven m.p.h. on the level—a brisk walk.

Swinton was given the job of raising and training the Tank Detachment, which eventually grew into the Royal Tank Corps. The name "tank" was his idea, to mislead possible spies, and it stuck.

[2] See for instance that on p. 287 of Liddell Hart's "The Remaking of Modern Armies" Boston: Little, Brown; 1928.

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While neither euphonious nor appropriate, it is an improvement on the German *Schützengrabenvernichtungpanzerkraftwagen.*

All concerned at first agreed on the sensible idea that the machines were not to be introduced to the enemy until a large number of them were available. But in the following July the C-in-C, Earl Haig, began his Somme offensive, which proved just one more case of trying to smother guns with targets. With horrible losses to explain and nothing but a few miles of mud to show for them, Haig ordered the available tanks put in regardless.

The conditions were something less than favorable: many of the tanks were partly worn out in training and in performing stunts for the benefit of curious generals. The authorities had ordered the tanks' wireless sets removed. They had forbidden the use of the miniature kite balloons which the tankers had obtained to hoist as directional landmarks. There was no time for training in infantry co-operation.

Fifty-nine tanks were sent to France. Between mechanical bugs, wear, and the mud of France, only fourteen tanks actually went into action at Flers on September 15, 1916; of these, five immediately got stuck. The remaining nine carried out their missions with moderate success; considering their embryonic state they did very well, certainly well enough to justify immediate further development.

The problem was solved.

Later in the war, and the Battles of Cambrai and Amiens, tanks of improved models were used hundreds at a time. They took great bites out of the German lines and rounded up thousands of prisoners. The Germans seem to have remembered these events.

During and after the war the concept of the independent armored striking force gradually developed, and was articulated by such men as de Gaulle in France and Fuller and Liddell Hart in England. Unfortunately, Captain Liddell Hart swung round during the 1930s to a defensive, limited-war philosophy, which was just what the English school of political yogis then in power wanted. General Fuller developed strong Fascist sympathies, wherefore his opinions were discounted on the unfounded theory that a man who entertains barbarous political notions must be wrong in his military ideas. On the contrary, Assurnazirpal and Timur were very successful generals despite their pyramids of heads.

The evolution of the fighting land vehicle—and to some extent the fighting air vehicle, too—has shown interesting parallels to the development of the fighting sea vehicle. For instance, the broadside guns of the Wilson-Tritton tanks have been replaced by guns in revolving turrets on the center line, which is exactly what happened to warships in the 1860s. Strategy and tactics have shown a similar convergence. But I needn't labor this point to science-fiction readers. If anything the story writers are inclined to overdo the parallels between mechanized war in different environments, and organize their space fleets into battleships, cruisers, and destroyers on the analogy of sea fleets. As the late George Gershwin wrote, "it ain't necessarily so."

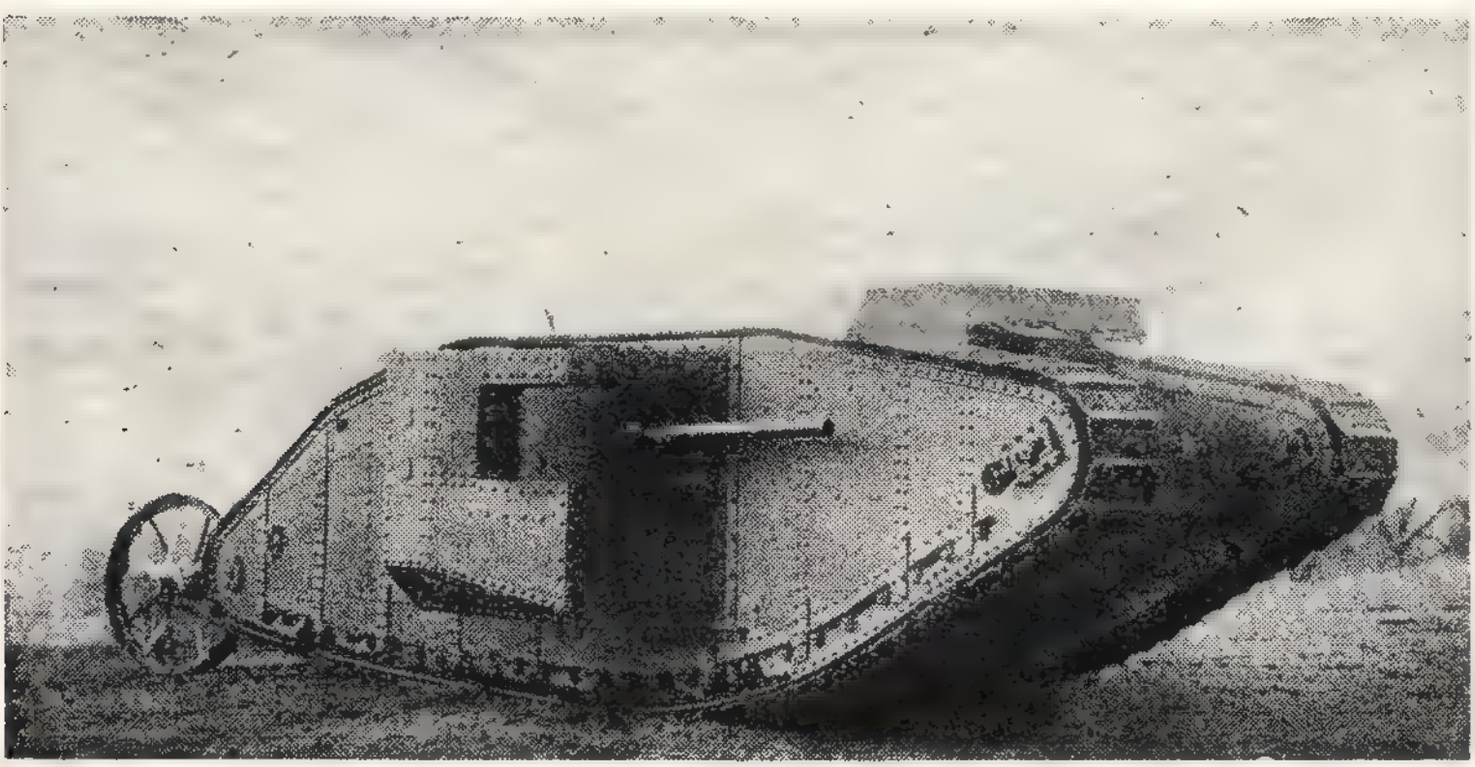

Fig. 5. "Mother," or "Big Willie," designed by Tritton and Wilson, built by Wm. Foster & Co., this was the first of the tanks—the first successful armored war vehicle, capable of overland travel on the field of battle, carrying effective weapons. This was the pilot model for the British Mark I of the first World War.

The principal lesson from this tale is a soberer and less glamorous one: that the road to invention is apt to be long, hard, and uncertain. We can't blame Leonardo for not realizing that his effort to design a tank was hopeless; that he'd have to wait for rapid-fire guns, the caterpillar track, and the internal-combustion engine, not to mention a host of subsidiary inventions in the form of gearing, steel manufacture, et cetera.

How far short of success the designers of the fifteenth-century battle cars were, is shown by a simple consideration of power requirements. The little American seven-ton tank of World War I, a copy of the French Renault, did six m.p.h. when feeling good, and carried only two men. It was powered by a thirty-nine hp. Renault engine, which is just about the minimum for moving a practical tank. Yet the battle-car designers tried to perform an equal or greater task with the two hp. furnished by a couple of flesh-and-blood horses!

Evidently we can't count on whistling up an invincible weapon in a month to defeat the invading Things; whether they come from the Third Galaxy or the Third Reich, our most vigorous efforts both in invention and in plain dirty fighting may not be any too strenuous.

And next time you hear that some wonderful invention has been turned down, don't jump to conclusions. It may, of course, be the case of the conservative astigmatism of a Major Maggiorotti or a Commodore Lambert. But there's always a chance that, instead of another tank, the device is merely another battle car!

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TIME LOCKER

By Lewis Padgett

● A useful little gadget. Stick anything in and it shrank, shrank to a point where it was invisible and totally concealed—but it would also shrink other things and permit curious sorts of crime—

Illustrated by M. Isip

Galloway played by ear, which would have been all right had he been a musician—but he was a scientist. A drunken and erratic one, but good. He'd wanted to be an experimental technician, and would have been excellent at it, for he had a streak of genius at times. Unfortunately, there had been no funds for such specialized education, and now Galloway, by profession an integrator machine supervisor, maintained his laboratory purely as a hobby. It was the damndest-looking lab in six States. Galloway had spent ten months building what he called a liquor organ, which occupied most of the space. He could recline on a comfortably padded couch and, by manipulating buttons, siphon drinks of marvelous quantity, quality, and variety down his scarified throat. Since he had made the liquor organ during a protracted period of drunkenness, he never remembered the basic principles of its construction. In a way, that was a pity.

There was a little of everything in the lab, much of it incongruous. Rheostats had little skirts on them, like ballet dancers, and vacuously grinning faces of clay. A generator was conspicuously labeled, "Monstro," and a much smaller one rejoiced in the name of "Bubbles." Inside a glass retort was a china rabbit, and Galloway alone knew how it had got there. Just inside the door was a hideous iron dog, originally intended for Victorian lawns or perhaps for Hell, and its hollowed ears served as sockets for test tubes.

"But how do you do it?" Vanning asked.

Galloway, his lank form reclining under the liquor organ, siphoned a shot of double Martini into his mouth. "Huh?"

"You heard me. I could get you a swell job if you'd use that screwball brain of yours. Or even learn to put up a front."

"Tried it," Galloway mumbled. "No use. I can't work when I concentrate, except at mechanical stuff. I think my subconscious must have a high I. Q."

Vanning, a chunky little man with a scarred, swarthy face, kicked his heels against Monstro. Sometimes Galloway annoyed him. The man never realized his own potentialities, or how much they might mean to Horace Vanning, Commerce Analyst. The "commerce," of course, was extra-legal, but the complicated trade relationships of 1970 left many loopholes a clever man could slip through. The fact of the matter was, Vanning acted in an advisory capacity to crooks. It paid well. A sound knowledge of jurisprudence was rare in these days; the statutes were in such a tangle that it took years of research before one could even enter a law school. But Vanning had a staff of trained experts, a colossal library of transcripts, decisions, and legal data, and, for a suitable fee, he could have told Dr. Crippen how to get off scot-free.

The shadier side of his business was handled in strict privacy, without assistants. The matter of the neuro-gun, for example—

Galloway had made that remarkable weapon, quite without realizing its importance. He had hashed it together one evening, piecing out the job with court plaster when his welder went on the fritz. And he'd given it to Vanning, on request. Vanning didn't keep it long. But already he had earned thousands of credits by lending the gun to potential murderers. As a result, the police department had a violent headache.

A man in the know would come to Vanning and say, "I heard you can beat a murder rap. Suppose I wanted to—"

"Hold on! I can't condone anything like that."

"Huh? But—"

"Theoretically, I suppose a perfect murder might be possible. Suppose a new sort of gun had been invented, and suppose—just for the sake of an example—it was in a locker at the Newark Stratoship Field."

"Huh?"

"I'm just theorizing. Locker Number 79, combination thirty-blue-eight. These little details always help one to visualize a theory, don't they?"

"You mean—"

"Of course if our murderer picked up this imaginary gun and used it, he'd be smart enough to have a postal box ready, addressed to . . . say . . . Locker 40, Brooklyn Port. He could slip the weapon into the box, seal it, and get rid of the evidence at the nearest mail convevor. But that's all theorizing. Sorry I can't help you. The fee for an interview is three thousand credits. The receptionist will take your check."

Later, conviction would be impossible. Ruling 875-M, Illinois Precinct, case of State vs. Dupson, set the precedent. Cause of death must be determined. Element of accident must be considered. As Chief Justice Duckett had ruled during the trial of Sanderson vs. Sanderson, which involved the death of the accused's mother-in-law—

Surely the prosecuting attorney, with his staff of toxicological experts, must realize that—

And in short, your honor, I must respectfully request that the case be dismissed for lack of evidence and proof of *casus mortis*—

Galloway never even found out that his neuro-gun was a dangerous weapon. But Vanning haunted the sloppy laboratory, avidly watching the results of his friend's scientific doodling. More than once he had acquired handy little devices in just this fashion. The trouble was, Galloway wouldn't *work!*

He took another sip of Martini, shook his head, and unfolded his lanky limbs. Blinking, he ambled over to a cluttered workbench and began toying with lengths of wire.

"Making something?"

"Dunno. Just fiddling. That's the way it goes. I put things together, and sometimes they work. Trouble is, I never know exactly what they're going to do. *Tsk!*" Galloway dropped the wires and returned to his couch. "Hell with it."

He was, Vanning reflected, an odd duck. Galloway was essentially amoral, thoroughly out of place in this too-complicated world. He seemed to watch, with a certain wry amusement, from a vantage point of his own, rather disinterested for the most part. And he made things—

But always and only for his own amusement. Vanning sighed and glanced around the laboratory, his orderly soul shocked by the mêlée. Automatically he picked up a rumpled smock from the floor, and looked for a hook. Of course there was none. Galloway, running short on conductive metal, had long since ripped them out and used them in some gadget or other.

The so-called scientist was creating a zombie, his eyes half closed. Vanning went over to a metal locker in one corner and opened the door. There were no hooks, but he folded the smock neatly and laid it on the floor of the locker.

Then he went back to his perch on Monstro.

"Have a drink?" Galloway asked.

Vanning shook his head. "Thanks, no. I've got a case coming up tomorrow."

"There's always thiamin. Filthy stuff. I work better when I've got pneumatic cushions around my brain."

"Well, I don't."

"It is purely a matter of skill," Galloway hummed, "to which each may attain if he will. . . . What are you gaping at?"

"That—locker," Vanning said, frowning in a baffled way. "What the—" He got up. The metal door hadn't been securely latched and had swung open. Of the smock Vanning had placed within the metal compartment there was no trace.

"It's the paint," Galloway explained sleepily. "Or the treatment. I bombarded it with gamma rays. But it isn't good for anything."

Vanning went over and swung a fluorescent into a more convenient position. The locker wasn't empty, as he had at first imagined. The smock was no longer there, but instead there was a tiny blob of—something, pale-green and roughly spherical.

"It melts things?" Vanning asked, staring.

"Uh-huh. Pull it out. You'll see."

Vanning felt hesitant about putting his hand inside the locker. Instead, he found a long pair of test-tube clamps and teased the blob out. It was—

Vanning hastily looked away. His eyes hurt. The green blob was changing in color, shape and size. A crawling, nongeometrical blur of motion rippled over it. Suddenly the clamps were remarkably heavy.

No wonder. They were gripping the original smock.

"It does that, you know," Galloway said absently. "Must be a reason, too. I put things in the locker and they get small. Take 'em out, and they get big again. I suppose I could sell it to a stage magician." His voice sounded doubtful.

Vanning sat down, fingering the smock and staring at the metal locker. It was a cube, approximately 3 x 3 x 5, lined with what seemed to be grayish paint, sprayed on. Outside, it was shiny black.

"How'd you do it?"

"Huh? I dunno. Just fiddling around." Galloway sipped his zombie. "Maybe it's a matter of dimensional extension. My treatment may have altered the spatio-temporal relationships inside the locker. I wonder what that means?" he murmured in a vague aside. "Words frighten me sometimes."

Vanning was thinking about tesseracts. "You mean it's bigger inside than it is outside?"

"A paradox, a paradox, a most delightful paradox. *You* tell *me*. I suppose the inside of the locker isn't in this space-time continuum at all. Here, shove that bench in it. You'll see." Galloway made no move to rise; he waved toward the article of furniture in question.

"You're right. That bench is bigger than the locker."

"So it is. Shove it in a bit at a time. That corner first. Go ahead."

Vanning wrestled with the bench. Despite his shortness, he was stockily muscular.

"Lay the locker on its back. It'll be easier."

"I . . . *uh!* . . . O. K. Now what?"

"Edge the bench down into it."

Vanning squinted at his companion, shrugged, and tried to obey. Of course the bench wouldn't go into the locker. One corner did, that was all. Then, naturally, the bench stopped, balancing precariously at an angle.

"Well?"

"Wait."

The bench moved. It settled slowly downward. As Vanning's jaw dropped, the bench seemed to crawl into the locker, with the gentle motion of a not-too-heavy object sinking through water. It wasn't sucked down. It melted down. The portion still outside the locker was unchanged. But that, too, settled, and was gone.

Vanning craned forward. A blur of movement hurt his eyes. Inside the locker was—something. It shifted its contours, shrank, and became a spiky sort of scalene pyramid, deep-purple in hue.

It seemed to be less than four inches across at its widest point.

"I don't believe it," Vanning said.

Galloway grinned. "As the Duke of Wellington remarked to the subaltern, it was a demned small bottle, sir."

"Now wait a minute. How the devil could I put an eight-foot bench inside of a five-foot locker?"

"Because of Newton," Galloway said. "Gravity. Go fill a test tube with water and I'll show you."

"Wait a minute . . . O. K. Now what?"

"Got it brim-full? Good. You'll find some sugar cubes in that drawer labeled 'Fuses.' Lay a cube on top of the test tube, one corner down so it touches the water."

Vanning racked the tube and obeyed. "Well?"

"What do you see?"

"Nothing. The sugar's getting wet. And melting."

"So there you are," Galloway said expansively. Vanning gave him a brooding look and turned back to the tube. The cube of sugar was slowly dissolving and melting down.

Presently it was gone.

"Air and water are different physical conditions. In air a sugar cube can exist as a sugar cube. In water it exists in solution. The corner of it extending into water is subject to aqueous conditions. So it alters physically, though not chemically. Gravity does the rest."

"Make it clearer."

"The analogy's clear enough, dope. The water represents the particular condition existing inside that locker. The sugar cube represents the workbench. Now! The sugar soaked up the water and gradually dissolved it, so gravity could pull the cube down into the tube as it melted. See?"

"I think so. The bench soaked up the . . . the *x* condition inside the locker, eh? A condition that shrank the bench—"

"*In partis,* not *in toto.* A little at a time. You can shove a human body into a small container of sulphuric acid, bit by bit."

"Oh," Vanning said, regarding the cabinet askance. "Can you get the bench out again?"

"Do it yourself. Just reach in and pull it out."

"*Reach* in? I don't want my hand to melt!"

"It won't. The action isn't instantaneous. You saw that yourself. It takes a few minutes for the change to take place. You can reach into the locker without any ill effects, if you don't leave your hand exposed to the conditions for more than a minute or so. I'll show you." Galloway languidly arose, looked around, and picked up an empty demijohn. He dropped this into the locker.

The change wasn't immediate. It occurred slowly, the demijohn altering its shape and size till it was a distorted cube the apparent size of a cube of sugar. Galloway reached down and brought it up again, placing the cube on the floor.

It grew. It was a demijohn again.

"Now the bench. Look out."

Galloway rescued the little pyramid. Presently it became the original workbench.

"You see? I'll bet a storage company would like this. You could probably pack all the furniture in Brooklyn in here, but there'd be trouble in getting what you wanted out again. The physical change, you know—"

"Keep a chart," Vanning suggested absently. "Draw a picture of how the thing looks inside the locker, and note down what it was."

"The legal brain," Galloway said. "I want a drink." He returned to his couch and clutched the siphon in a gwip of death.

"I'll give you six credits for the thing," Vanning offered.

"Sold. It takes up too much room anyway. Wish I could put it inside itself." The scientist chuckled immoderately. "That's very funny."

"Is it?" Vanning said. "Well, here you are." He took credit coupons from his wallet. "Where'll I put the dough?"

"Stuff it into Monstro. He's my bank. . . . Thanks."

"Yeah. Say, elucidate this sugar business a bit, will you? It isn't just gravity that affects the cube so it slips into a test tube. Doesn't the water soak up into the sugar—"

"You're right at that. Osmosis. No, I'm wrong. Osmosis has something to do with eggs. Or is that ovulation? Conduction, convection—absorption! Wish I'd studied physics; then I'd know the right words. Just a zoot stoop, that's me. I shall take the daughter of the Vine to spouse," Galloway finished incoherently and sucked at the siphon.

"Absorption," Vanning scowled. "Only not water, being soaked up by the sugar. The . . . the *conditions* existing inside the locker, being soaked up by your workbench—in that particular case.

"Like a sponge or a blotter."

"The bench?"

"Me," Galloway said succinctly, and relapsed into a happy silence, broken by occasional gurgles as he poured liquor down his scarified gullet. Vanning sighed and turned to the locker. He carefully closed and latched the door before lifting the metal cabinet in his muscular arms.

"Going? G'night. Fare thee well, fare thee well—"

"Night."

"*Fare*—thee—well!" Galloway ended, in a melancholy outburst of tunefulness, as he turned over preparatory to going to sleep.

Vanning sighed again and let himself out into the coolness of the night. Stars blazed in the sky, except toward the south, where the aurora of Lower Manhattan dimmed them. The glowing white towers of skyscrapers rose in a jagged pattern. A sky-ad announced the virtues of Vambulin—"It Peps You Up."

His speeder was at the curb. Vanning edged the locker into the trunk compartment and drove toward the Hudson Floatway, the quickest route downtown. He was thinking about Poe.

The Purloined Letter, which had been hidden in plain sight, but re-folded and re-addressed, so that its superficial appearance was changed. Holy Hutton! What a perfect safe the locker would make! No thief could crack it, for the obvious reason that it wouldn't be locked. No thief would *want* to clean it out. Vanning could fill the locker

with credit coupons and instantly they'd become unrecognizable. It was the ideal cache.

How the devil did it work?

There was little use in asking Galloway. He played by ear. A primrose by the river's rim a simple primrose was to him—not *Primula vulgaris.* Syllogisms were unknown to him. He reached the conclusion without the aid of either major or minor premises.

Vanning pondered. Two objects cannot occupy the same space at the same time. *Ergo,* there was a different sort of space in the locker—

But Vanning was jumping at conclusions. There was another answer—the right one. He hadn't guessed it yet.

Instead, he tooled the speeder downtown to the office building where he maintained a floor, and brought the locker upstairs in the freight lift. He didn't put it in his private office; that would have been too obvious. He placed the metal cabinet in one of the storerooms, sliding a file cabinet in front of it for partial concealment. It wouldn't do to have the clerks using this particular locker.

Vanning stepped back and considered. Perhaps—

A bell rang softly. Preoccupied, Vanning didn't hear it at first. When he did, he went back to his own office and pressed the acknowledgment button on the Winchell. The gray, harsh, bearded face of Counsel Hatton appeared, filling the screen.

"Hello," Vanning said.

Hatton nodded. "I've been trying to reach you at your home. Thought I'd try the office—"

"I didn't expect you to call now. The trial's tomorrow. It's a bit late for discussion, isn't it?"

"Dugan & Sons wanted me to speak to you. I advised against it."

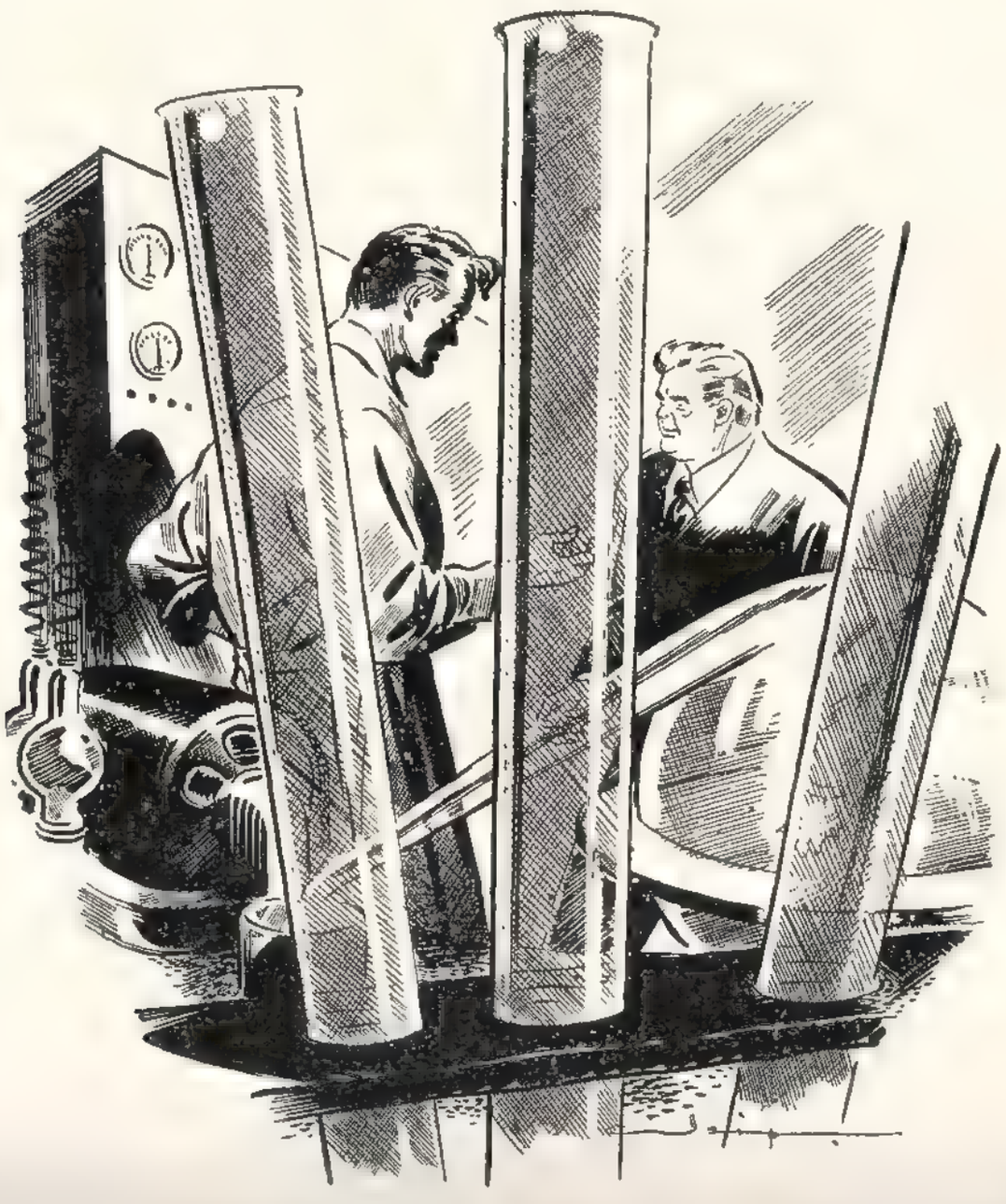
"Oh?"

Hatton's thick gray brows drew together. "I'm prosecuting, you know. There's plenty of evidence against MacIlson."

"So you say. But peculation's a difficult charge to prove."

"Did you get an injunction against scop?"

"Naturally," Vanning said. "You're not using truth serum on my client!"



"That'll prejudice the jury."

"Not on medical grounds. Scop affects MacIlson harmfully. I've got a covering prognosis."

"Harmfully is right!" Hatton's voice was sharp. "Your client embezzled those bonds, and I can prove it."

"Twenty-five thousand in credits, it comes to, eh? That's a lot for Dugan & Sons to lose. What about that hypothetical case I posed? Suppose twenty thousand were recovered—"

"Is this a private beam? No recordings?"

"Naturally. Here's the cut-off." Vanning held up a metal-tipped cord. "This strictly *sub rosa*."

"Good," Counsel Hatton said. "Then I can call you a lousy shyster."

"*Tch!*"

"Your gag's too old. It's moth-eaten. MacIlson swiped five grand in bonds, negotiable into credits. The auditors start checking up. MacIlson comes to you. You tell him to take twenty grand more, and offer to return that twenty if Dugan & Sons refuse to prosecute. MacIlson splits with you on the five thousand, and on the plat standard, that ain't hay."

"I don't admit to anything like that."

"Naturally you don't, not even on a closed beam. But it's tacit. However, the gag's moth-eaten, and my clients won't play ball with you. They're going to prosecute."

"You called me up just to tell me that?"

"No, I want to settle the jury question. Will you agree to let 'em use scop on the panel?"

"O. K.," Vanning said. He wasn't depending on a fixed jury tomorrow. His battle would be based on legal technicalities. With scop-tested talesmen, the odds would be even. And such an arrangement would save days or weeks of argument and challenge.

"Good," Hatton grunted. "You're going to get your pants licked off."

Vanning replied with a mild obscenity and broke the connection. Reminded of the pending court fight, he forced the matter of the fourth-dimensional locker out of his mind and left the office. Later—

Later would be time enough to investigate the possibilities of the remarkable cabinet more thoroughly. Just now, he didn't want his brain cluttered with nonessentials. He went to his apartment, had the servant mix him a short highball, and dropped into bed.

And, the next day, Vanning won his case. He based it on complicated technicalities and obscure legal precedents. The crux of the matter was that the bonds had not been converted into government credits. Abstruse economic charts proved that point for Vanning. Conversion of even five thousand credits would have caused a fluctuation in the graph line, and no such break existed. Vanning's experts went into monstrous detail.

In order to prove guilt, it would have been necessary to show, either actually or by inference, that the bonds had been in existence since last December 20th, the date of their most recent check-and-recording. The case of Donovan vs. Jones stood as a precedent.

Hatton jumped to his feet. "Jones later confessed to his defalcation, your honor!"

"Which does not affect the original decision," Vanning said smoothly. "Retroaction is not admissible here. The verdict was not proven."

"Counsel for the defense will continue."

Counsel for the defense continued, building up a beautifully intricate edifice of casuistic logic.

Hatton writhed. "Your honor! I—"

"If my learned opponent can produce one bond —just one of the bonds in question—I will concede the case."

The presiding judge looked sardonic. "Indeed! If such a piece of evidence could be produced, the defendant would be jailed as fast as I could pronounce sentence. You know that very well, Mr. Vanning. Proceed."

"Very well. My contention, then, is that the bonds never existed. They were the result of a clerical error in notation."

"A clerical error in a Pederson Calculator?"

"Such errors have occurred, as I shall prove. If I may call my next witness—"

Unchallenged, the witness, a math technician, explained how a Pederson Calculator can go haywire. He cited cases.

Hatton caught him up on one point. "I protest this proof. Rhodesia, as everyone knows, is the location of a certain important experimental industry. Witness has refrained from stating the nature of the work performed in this particular Rhodesian factory. Is it not a fact that the Henderson United Company deals largely in radioactive ores?"

"Witness will answer."

"I can't. My records don't include that information."

"A significant omission," Hatton snapped. "Radioactivity damages the intricate mechanism of a Pederson Calculator. There is no radium nor radium by-product in the offices of Dugan & Sons."

Vanning stood up. "May I ask if those offices have been fumigated lately?"

"They have. It is legally required."

"A type of chlorine gas was used?"

"Yes."

"I wish to call my next witness."

The next witness, a physicist and official in the Ultra Radium Institute, explained that gamma radiations affect chlorine strongly, causing ionization. Living organisms could assimilate by-products of radium and transmit them in turn. Cer-

tain clients of Dugan & Sons had been in contact with radioactivity—

"This is ridiculous, your honor! Pure theorization—"

Vanning looked hurt. "I cite the case of Dangerfield vs. Austro Products, California, 1963. Ruling states that the uncertainty factor is prime admissible evidence. My point is simply that the Pederson Calculator which recorded the bonds could have been in error. If this be true, there were no bonds, and my client is guiltless."

"Counsel will continue," said the judge, wishing he were Jeffries so he could send the whole damned bunch to the scaffold. Jurisprudence should be founded on justice, and not be a three-dimensional chess game. But, of course, it was the natural development of the complicated political and economic factors of modern civilization. It was already evident that Vanning would win his case.

And he did. The jury was directed to find for the defendant. On a last, desperate hope, Hatton raised a point of order and demanded scop, but his petition was denied. Vanning winked at his opponent and closed his brief case.

That was that.

Vanning returned to his office. At four-thirty that afternoon trouble started to break. The secretary announced a Mr. MacIlson, and was pushed aside by a thin, dark, middle-aged man lugging a gigantic suedette suitcase.

"Vanning! I've got to see you—"

The attorney's eyes hooded. He rose from behind his desk, dismissing the secretary with a jerk of his head. As the door closed, Vanning said brusquely, "What are you doing here? I told you to stay away from me. What's in that bag?"

"The bonds," MacIlson explained, his voice unsteady. "Something's gone wrong—"

"You crazy fool! Bringing the bonds here—" With a leap Vanning was at the door, locking it. "Don't you realize that if Hatton gets his hands on that paper, you'll be yanked back to jail? And I'll be disbarred! Get 'em out of here."

"Listen a minute, will you? I took the bonds to Finance Unity, as you told me, but . . . but there was an officer there, waiting for me. I saw him just in time. If he'd caught me—"

Vanning took a deep breath. "You were supposed to leave the bonds in that subway locker for two months."

MacIlson pulled a news sheet from his pocket. "But the government's declared a freeze on ore stocks and bonds. It'll go into effect in a week. I couldn't wait—the money would have been tied up indefinitely."

"Let's see that paper." Vanning examined it and cursed softly. "Where'd you get this?"

"Bought it from a boy outside the jail. I wanted to check the current ore quotations."

"Uh-huh. I see. Did it occur to you that this sheet might be faked?"

MacIlson's jaw dropped. "Fake?"

"Exactly. Hatton figured I might spring you, and had this paper ready. You bit. You led the police right to the evidence, and a swell spot you've put me in."

"B-but—"

Vanning grimaced. "Why do you suppose you saw that cop at Finance Unity? They could have nabbed you any time. But they wanted to scare you into heading for my office, so they could catch both of us on the same hook. Prison for you, disbarment for me. Oh, hell!"

MacIlson licked his lips. "Can't I get out a back door?"

"Through the cordon that's undoubtedly waiting? Orbs! Don't be more of a sap than you can help."

"Can't you—hide the stuff?"

"Where? They'll ransack this office with X rays. No, I'll just—" Vanning stopped. "Oh. Hide it, you said. *Hide it—*"

He whirled to the dictograph. "Miss Horton? I'm in conference. Don't disturb me for anything. If anybody hands you a search warrant, insist on verifying it through headquarters. Got me? O. K."

Hope had returned to MacIlson's face. "Is it all right?"

"Oh, shut up!" Vanning snapped. "Wait here for me. Be back directly." He headed for a side door and vanished. In a surprisingly short time he returned, awkwardly lugging a metal cabinet.

"Help me . . . *uh!* . . . here. In this corner. Now get out."

"But—"

"Flash," Vanning ordered. "Everything's under control. Don't talk. You'll be arrested, but they can't hold you without evidence. Come back as soon as you're sprung." He urged MacIlson to the door, unlocked it, and thrust the man through. After that, he returned to the cabinet, swung open the door, and peered in. Empty. Sure.

The suedette suitcase—

Vanning worked it into the locker, breathing hard. It took a little time, since the valise was larger than the metal cabinet. But at last he relaxed, watching the brown case shrink and alter its outline till it was tiny and distorted, the shape of an elongated egg, the color of a copper cent piece.

"Whew!" Vanning said.

Then he leaned closer, staring. Inside the locker, something was moving. A grotesque little creature less than four inches tall was visible. It was a shocking object, all cubes and angles, a bright green in tint, and it was obviously alive.

Someone knocked on the door.

The tiny—thing—was busy with the copper-colored egg. Like an ant, it was lifting the egg and trying to pull it away. Vanning gasped and reached into the locker. The fourth-dimensional creature dodged. It wasn't quick enough. Vanning's hand descended, and he felt wriggling movement against his palm.

He squeezed.

The movement stopped. He let go of the dead thing and pulled his hand back swiftly.

The door shook under the impact of fists.

Vanning closed the locker and called, "Just a minute."

"Break it down," somebody ordered.

But that wasn't necessary. Vanning put a painful smile on his face and turned the key. Counsel Hatton came in, accompanied by bulky policemen. "We've got MacIlson," he said.

"Oh? Why?"

For answer Hatton jerked his hand. The officers began to search the room. Vanning shrugged.

"You've jumped the gun," he said. "Breaking and entering—"

"We've got a warrant."

"Charge?"

"The bonds, of course." Hatton's voice was weary. "I don't know where you've hid that suitcase, but we'll find it."

"What suitcase?" Vanning wanted to know.

"The one MacIlson had when he came in. The one he didn't have when he went out."

"The game," Vanning said sadly, "is up. You win."

"Eh?"

"If I tell you what I did with the suitcase, will you put in a good word for me?"

"Why . . . yeah. Where—"

"I ate it," Vanning said, and retired to the couch, where he settled himself for a nap. Hatton gave him a long, hating look. The officers tore in—

They passed by the locker, after a casual glance inside. The X rays revealed nothing, in walls, floor, ceiling, or articles of furniture. The other offices were searched, too. Vanning applauded the painstaking job.

In the end, Hatton gave up. There was nothing else he could do.

"I'll clap suit on you tomorrow," Vanning promised. "Same time I get a habeas corpus on MacIlson."

"Step to hell," Hatton growled.

"'By now."

Vanning waited till his unwanted guests had departed. Then, chuckling quietly, he went to the locker and opened it.

The copper-colored egg that represented the suedette suitcase had vanished. Vanning groped inside the locker, finding nothing.

The significance of this didn't strike Vanning at first. He swung the cabinet around so that it faced the window. He looked again, with identical results.

The locker was empty.

Twenty-five thousand credits in negotiable ore bonds had disappeared.

Vanning started to sweat. He picked up the metal box and shook it. That didn't help. He carried it across the room and set it up in another corner, returning to search the floor with painstaking accuracy. *Holy—*

Hatton?

No. Vanning hadn't let the locker out of his sight from the time the police had entered till they left. An officer had swung open the cabinet's door, looked inside, and closed it again. After that the door had remained shut, till just now.

The bonds were gone.

So was the abnormal little creature Vanning had crushed. All of which meant—what?

Vanning approached the locker and closed it, clicking the latch into position. Then he reopened it, not really expecting that the copper-colored egg would reappear.

He was right. It didn't.

Vanning staggered to the Winchell and called Galloway.

"Whatzit? Huh? Oh. What do you want?" The scientist's gaunt face appeared on the screen, rather the worse for wear. "I got a hangover. Can't use thiamin, either. I'm allergic to it. How'd your case come out?"

"Listen," Galloway said urgently, "I put something inside that damn locker of yours and now it's gone."

"The locker? That's funny."

"No! The thing I put in it. A . . . a suitcase."

Galloway shook his head thoughtfully. "You never know, do you? I remember once I made a—"

"The hell with that. I want that suitcase back!"

"An heirloom?" Galloway suggested.

"No, there's money in it."

"Wasn't that a little foolish of you? There hasn't been a bank failure since 1949. Never suspected you were a miser, Vanning. Like to have the stuff around, so you can run it through your birdlike fingers, eh?"

"You're drunk."

"I'm *trying*," Galloway corrected. "But I've built up an awful resistance over a period of years. It takes time. Your call's already set me back two and a half drinks. I must put an extension on the siphon, so I can Winchell and guzzle at the same time."

Vanning almost chattered incoherently into the

mike. "My suitcase! What happened to it? I want it back."

"Well, I haven't got it."

"Can't you find out where it is?"

"Dunno. Tell me the details. I'll see what I can figure out."

Vanning complied, revising his story as caution prompted.

"O. K.," Galloway said at last, rather unwillingly. "I hate working out theories, but just as a favor. . . . My diagnosis will cost you fifty credits."

"What? Now listen—"

"Fifty credits," Galloway repeated unflinchingly. "Or no prognosis."

"How do I know you can get it back for me?"

"Chances are I can't. Still, maybe . . . I'll have to go over to Mechanistra and use some of their machines. They charge a good bit, too. But I'll need forty-brain-power calculators—"

"O. K., O. K.!" Vanning growled. "Hop to it. I want that suitcase back."

"What interests me is that little bug you squashed. In fact, that's the only reason I'm tackling your problem. Life in the fourth dimension—" Galloway trailed off, murmuring. His face faded from the screen. After a while Vanning broke the connection.

He re-examined the locker, finding nothing new. Yet the suedette suitcase had vanished from it, into thin air. Oh, hell!

Brooding over his sorrows, Vanning shrugged into a top coat and dined vinously at the Manhattan Roof. He felt very sorry for himself.

The next day he felt even sorrier. A call to Galloway had given the blank signal, so Vanning had to mark time. About noon MacIlson dropped in. His nerves were shot.

"You took your time in springing me," he started immediately. "Well, what now? Have you got a drink anywhere around?"

"You don't need a drink," Vanning grunted. "You've got a skinful already, by the look of you. Run down to Florida and wait till this blows over."

"I'm sick of waiting. I'm going to South America. I want some credits."

"Wait'll I arrange to cash the bonds."

"I'll take the bonds. A fair half, as we agreed."

Vanning's eyes narrowed. "And walk out into the hands of the police. Sure."

MacIlson looked uncomfortable. "I'll admit I made a boner. But this time—no, I'll play smart now."

"You'll wait, you mean."

"There's a friend of mine on the roof parking lot, in a helicopter. I'll go up and slip him the bonds, and then I'll just walk out. The police won't find anything on me."

"I said no," Vanning repeated. "It's too dangerous."

"It's dangerous as things are. If they locate the bonds—"

"They won't."

"Where'd you hide 'em?"

"That's my business."

MacIlson glowered nervously. "Maybe. But they're in this building. You couldn't have fenagled 'em out yesterday before the cops came. No use playing your luck too far. Did they use X rays?"

"Yeah."

"Well, I heard Counsel Hatton's got a batch of experts going over the blueprints on this building. He'll find your safe. I'm getting out of here before he does."

Vanning patted the air. "You're hysterical. I've taken care of you, haven't I? Even though you almost screwed the whole thing up."

"Sure," MacIlson said, pulling at his lip. "But I—" He chewed a fingernail. "Oh, damn! I'm sitting on the edge of a volcano with termites under me. I can't stay here and wait till they find the bonds. They can't extradite me from South America—where I'm going, anyway."

"You're going to wait," Vanning said firmly. "That's your best chance."

There was suddenly a gun in MacIlson's hand. "You're going to give me half the bonds. Right now. I don't trust you a little bit. You figure you can stall me along—hell, get those bonds!"

"No," Vanning said.

"I'm not kidding."

"I know you aren't. I can't get the bonds."

"Eh? Why not?"

"Ever heard of a time lock?" Vanning asked, his eyes watchful. "You're right; I put the suitcase in a concealed safe. But I can't open that safe till a certain number of hours have passed."

"Mm-m." MacIlson pondered. "When—"

"Tomorrow."

"All right. You'll have the bonds for me then?"

"If you want them. But you'd better change your mind. It'd be safer."

For answer MacIlson grinned over his shoulder as he went out. Vanning sat motionless for a long time. He was, frankly, scared.

The trouble was, MacIlson was a manic-depressive type. He'd kill. Right now, he was cracking under the strain, and imagining himself a desperate fugitive. Well—precautions would be advisable.

Vanning called Galloway again, but got no answer. He left a message on the recorder and thoughtfully looked into the locker again. It was empty, depressingly so.

That evening Galloway let Vanning into his laboratory. The scientist looked both tired and

drunk. He waved comprehensively toward a table, covered with scraps of paper.

"What a headache you gave me! If I'd known the principles behind that gadget, I'd have been afraid to tackle it. Sit down. Have a drink. Got the fifty credits?"

Silently Vanning handed over the coupons. Galloway shoved them into Monstro. "Fine. Now—" He settled himself on the couch. "Now we start. The fifty credit question."

"Can I get the suitcase back?"

"No," Galloway said flatly. "At least, I don't see how it can be worked. It's in another spatio-temporal sector."

"Just what does that mean?"

"It means the locker works something like a telescope, only the thing isn't merely visual. The locker's a window, I figure. You can reach through it as well as look through it. It's an opening into Now plus x."

Vanning scowled. "So far you haven't said anything."

"So far all I've got is theory, and that's all I'm likely to get. Look. I was wrong originally. The things that went into the locker didn't appear in another space, because there would have been a spatial constant. I mean, they wouldn't have got smaller. Size is size. Moving a one-inch cube from here to Mars wouldn't make it any larger or smaller."

"What about a different density in the surrounding medium? Wouldn't that crush an object?"

"Sure, and it'd stay squashed. It wouldn't return to its former size and shape when it was taken out of the locker again. X plus y never equal xy. But x times y—"

"So?"

"That's a pun," Galloway broke off to explain. "The things we put in the locker went into time. Their time-rate remained constant, but not the spatial relationships. Two things can't occupy the same place at the same time. *Ergo*, your suitcase went into a different time. Now plus x. And what x represents I don't know, though I suspect a few million years."

Vanning looked dazed. "The suitcase is a million years in the future?"

"Dunno how far, but—I'd say plenty. I haven't enough factors to finish the equation. I reasoned by induction, mostly, and the results are screwy as hell. Einstein would have loved it. My theorem shows that the universe is expanding and contracting at the same time."

"What's that got to do—"

"Motion is relative," Galloway continued inexorably. "That's a basic principle. Well, the Universe *is* expanding, spreading out like a gas, but its component parts are shrinking at the same time. The *parts* don't actually grow, you know—not the suns and atoms. They just run away

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from the central point. Galloping off in all directions . . . where was I? Oh. Actually, the Universe, taken as a unit, is shrinking."

"So it's shrinking. Where's my suitcase?"

"I told you. In the future. Inductive reasoning showed that. It's beautifully simple and logical. And it's quite impossible of proof, too. A hundred, a thousand, a million years ago the Earth—the Universe—was larger than it is now. And it continues to contract. Sometime in the future the Earth will be just half as small as it is now. Only we won't notice it because the Universe will be proportionately smaller."

Galloway went on dreamily. "We put a workbench into the locker, so it emerged sometime in the future. The locker's an open window into a different time, as I told you. Well, the bench was affected by the conditions of that period. It shrank, after we gave it a few seconds to soak up the entropy or something. Do I mean entropy? Allah knows. Oh, well."

"It turned into a pyramid."

"Maybe there's geometric distortion, too. Or it might be a visual illusion. Perhaps we can't get the exact focus. I doubt if things will really look different in the future—except that they'll be smaller—but we're using a window into the fourth dimension. We're taking a pleat in time. It must be like looking through a prism. The alteration in size is real, but the shape and color are altered to our eyes by the fourth-dimensional prism."

"The whole point, then, is that my suitcase is in the future. Eh? But why did it disappear from the locker?"

"What about that little creature you squashed? Maybe he had pals. They wouldn't be visible till they came into the very narrow focus of the whatchmaycallit, but—figure it out. Sometime in the future, in a hundred or a thousand or a million years, a suitcase suddenly appears out of thin air. One of our descendants investigates. You kill him. His pals come along and carry the suitcase away, out of range of the locker. In space it may be anywhere, and the time factor's an unknown quantity. Now plus x. It's a time locker. Well?"

"Hell!" Vanning exploded. "So that's all you can tell me? I'm supposed to chalk it up to profit and loss?"

"Uh-huh. Unless you want to crawl into the locker yourself after your suitcase. Lord knows where you'd come out, though. The proportions of the air probably would have changed in a few thousand years. There might be other alterations, too."

"I'm not that crazy."

So there he was. The bonds were gone, beyond hope of redemption. Vanning could resign himself to that loss, once he knew the securities wouldn't fall into the hands of the police. But MacIlson was another matter, especially after a bullet spattered against the glassolex window of Vanning's office.

An interview with MacIlson had proved unsatisfactory. The defaulter was convinced that Vanning was trying to bilk him. He was removed forcibly, yelling threats. He'd go to the police—he'd confess—

Let him. There was no proof. The hell with him. But, for safety's sake, Vanning clapped an injunction on his quondam client.

It didn't land. MacIlson clipped the official on the jaw and fled. Now, Vanning suspected, he lurked in dark corners, armed, and anxious to commit homicide. Obviously a manic-depressive type.

Vanning took a certain malicious pleasure in demanding a couple of plain-clothes men to act as his guards. Legally, he was within his rights, since his life had been threatened. Until MacIlson was under sufficient restriction, Vanning would be protected. And he made sure that his guards were two of the best shots on the Manhattan force.

He also found out that they had been told to keep their eyes peeled for the missing bonds and the suedette suitcase. Vanning Winchelled Counsel Hatton and grinned at the screen.

"Any luck yet?"

"What do you mean?"

"My watchdogs. Your spies. They won't find the bonds, Hatton. Better call 'em off. Why make the poor devils do two jobs at once?"

"One job would be enough. Finding the evidence. If MacIlson drilled you, I wouldn't be too unhappy."

"Well, I'll see you in court," Vanning said. "You're prosecuting Watson, aren't you?"

"Yes. Are you waiving scop?"

"On the jurors? Sure. I've got this case in the bag."

"That's what you think," Hatton said, and broke the beam.

Chuckling, Vanning donned his topcoat, collected the guards, and headed for court. There was no sign of MacIlson—

Vanning won the case, as he had expected. He returned to his offices, collected a few unimportant messages from the switchboard girl, and walked toward his private suite. As he opened the door, he saw the suedette suitcase on the carpet in one corner.

He stopped, hand frozen on the latch. Behind him he could hear the heavy footsteps of the guards. Over his shoulder Vanning said, "Wait a minute," and dodged into the office, slamming and locking the door behind him. He caught the tail end of a surprised question.

The suitcase. There it was, unequivocally. And, quite as unequivocally, the two plain-clothes men,

after a very brief conference, were hammering on the door, trying to break it down.

Vanning turned green. He took a hesitant step forward, and then saw the locker, in the corner to which he had moved it. The time locker—

That was it. If he shoved the suitcase inside the locker, it would become unrecognizable. Even if it vanished again, that wouldn't matter. What mattered was the vital importance of getting rid—immediately!—of incriminating evidence.

The door rocked on its hinges. Vanning scuttled toward the suitcase and picked it up. From the corner of his eye he saw movement.

In the air above him, a hand had appeared. It was the hand of a giant, with an immaculate cuff fading into emptiness. Its huge fingers were reaching down—

Vanning screamed and sprang away. He was too slow. The hand descended, and Vanning wriggled impotently against the palm.

The hand contracted into a fist. When it opened, what was left of Vanning dropped squashily to the carpet, which it stained.

The hand withdrew into nothingness. The door fell in and the plain-clothes men stumbled over it as they entered.

It didn't take long for Hatton and his cohorts to arrive. Still, there was little for them to do except clean up the mess. The suedette bag, containing twenty-five thousand credits in negotiable bonds, was carried off to a safer place. Vanning's body was scraped up and removed to the morgue. Photographers flashed pictures, fingerprint experts insufflated their white powder, X ray men worked busily. It was all done with swift efficiency, so that within an hour the office was empty and the door sealed.

Thus there were no spectators to witness the advent of a gigantic hand that appeared from nothingness, groped around as though searching for something, and presently vanished once more—

The only person who could have thrown light on the matter was Galloway, and his remarks were directed to Monstro, in the solitude of his laboratory. All he said was:

"So that's why that workbench materialized for a few minutes here yesterday. Hm-m-m. Now plus x—and x equals about a week. Still, why not? It's all relative. But—I never thought the Universe was shrinking *that* fast!"

He relaxed on the couch and siphoned a double Martini.

"Yeah, that's it," he murmured after a while. "*Whew!* I guess Vanning must have been the only guy who ever reached into the middle of next week and—killed himself! I think I'll get tight."

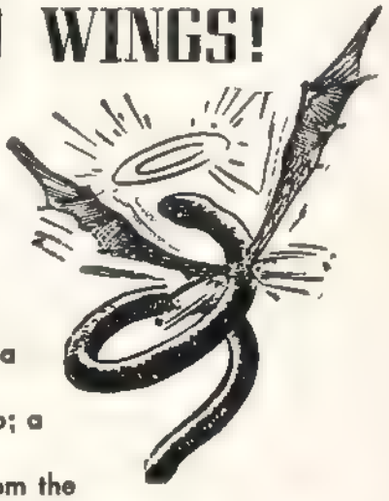
And he did.

THE END.

FISHING WORMS . . .

COMPLETE WITH

HALO AND WINGS!



Charlie Wills knew something was wrong. In fact, many things were wrong. Like: a worm with wings and halo; a bad case of sunburn—from the rain; a coin in a museum that turned into a wild duck. Such things didn't happen to people (except Charlie). And a great many other disturbing events occurred, until Charlie was nearly driven to suicide. But it had a perfectly sane, logical explanation. You won't be able to put the story down until you find out just why the angleworm had a halo in

THE ANGELIC ANGLE-WORM,

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UNKNOWN WORLDS

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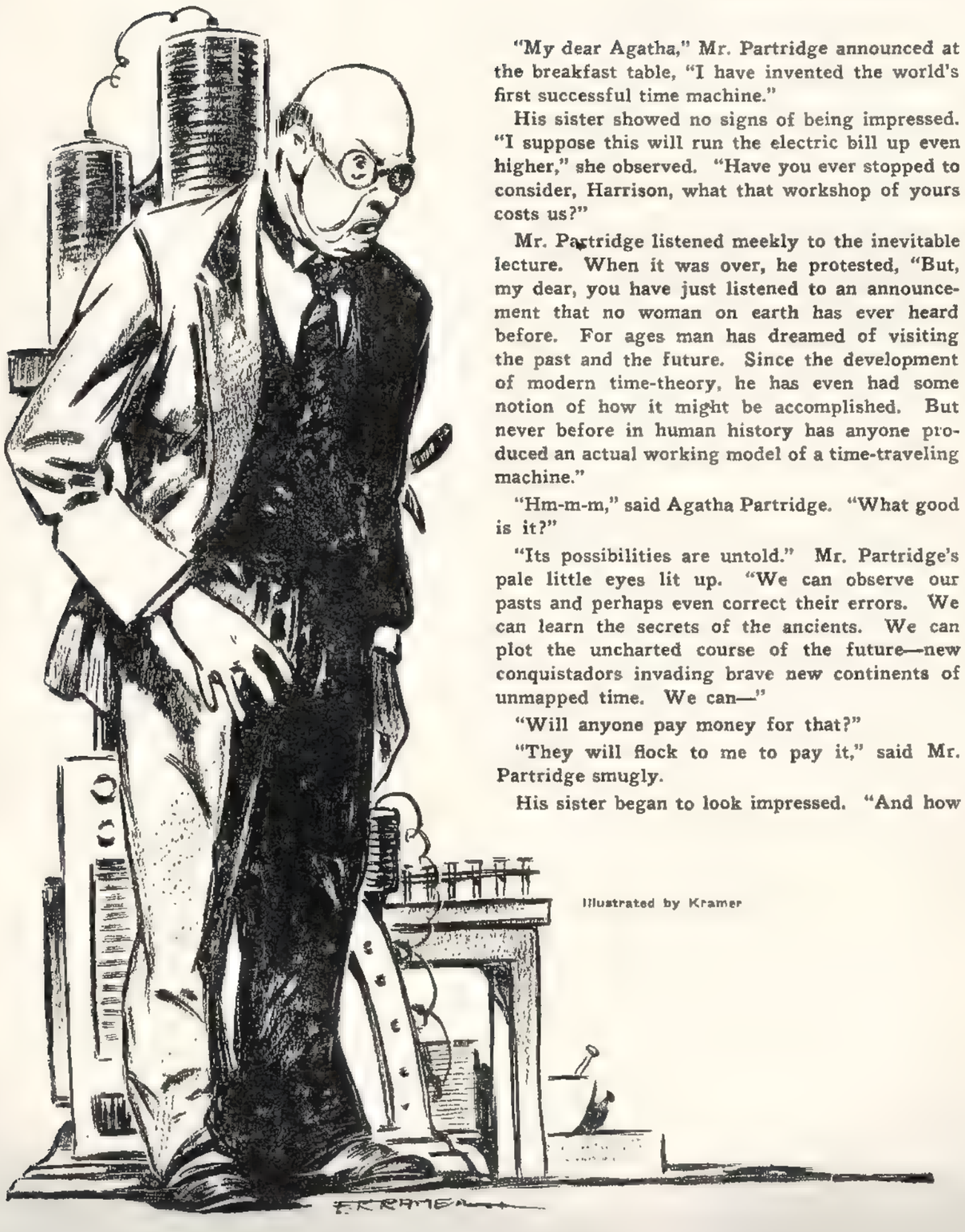

ELSEWHEN

By Anthony Boucher

"My dear Agatha," Mr. Partridge announced at the breakfast table, "I have invented the world's first successful time machine."

His sister showed no signs of being impressed. "I suppose this will run the electric bill up even higher," she observed. "Have you ever stopped to consider, Harrison, what that workshop of yours costs us?"

Mr. Partridge listened meekly to the inevitable lecture. When it was over, he protested, "But, my dear, you have just listened to an announcement that no woman on earth has ever heard before. For ages man has dreamed of visiting the past and the future. Since the development of modern time-theory, he has even had some notion of how it might be accomplished. But never before in human history has anyone produced an actual working model of a time-traveling machine."

"Hm-m-m," said Agatha Partridge. "What good is it?"

"Its possibilities are untold." Mr. Partridge's pale little eyes lit up. "We can observe our pasts and perhaps even correct their errors. We can learn the secrets of the ancients. We can plot the uncharted course of the future—new conquistadors invading brave new continents of unmapped time. We can—"

"Will anyone pay money for that?"

"They will flock to me to pay it," said Mr. Partridge smugly.

His sister began to look impressed. "And how far can you travel with your time machine?"

Mr. Partridge buttered a piece of toast with absorbed concentration, but it was no use. His sister repeated the question: "How far can you go?"

"Not very far," Mr. Partridge admitted reluctantly. "In fact," he added hastily as he saw a more specific question forming, "hardly at all. And only one way. But remember," he went on, gathering courage, "the Wright brothers did not cross the Atlantic in their first model. Marconi did not launch radio with a world-wide broadcast. This is only the beginning and from this seed—"

Agatha's brief interest had completely subsided. "I thought so," she said. "You'd still better watch the electric bill."

It would be that way, Mr. Partridge thought, wherever he went, whomever he saw. "How far can you go?" "Hardly at all." "Good day, sir." People have no imagination. They cannot be made to see that to move along the time line with free volitional motion, unconditioned by the relentless force that pushes mankind along at the unchanging rate of—how shall one put it—one second per second—that to do this for even one little fraction of a second was as great a miracle as to zoom spectacularly ahead to 5900 A. D. He had, he could remember, felt disappointed at first himself—

The discovery had been made by accident. An experiment which he was working on—part of his long and fruitless attempt to recreate by modern scientific method the supposed results described in ancient alchemical works—had necessitated the setting up of a powerful magnetic field. And part of the apparatus within this field was a chronometer.

Illustrated by Kramer

● The first practical time machine in the hands of an impractical man may lead to unnecessary murder and unnecessary suicide —but it makes a perfect alibi.

Mr. Partridge noted the time when he began his experiment. It was exactly fourteen seconds after nine thirty-one. And it was precisely at that moment that the tremor came. It was not a serious shock. To one who, like Mr. Partridge, had spent the past twenty years in southern California it was hardly noticeable, beyond the bother of a broken glass tube which had rolled off a table. But when he looked back at the chronometer, the dial read ten thirteen.

Time can pass quickly when you are absorbed in your work, but not so quickly as all that. Mr. Partridge looked at his pocket watch. It said nine thirty-two. Suddenly, in a space of seconds, the best chronometer available had gained forty-two minutes.

The more Mr. Partridge considered the matter, the more irresistibly one chain of logic forced itself upon him. The chronometer was accurate; therefore it had registered those forty-two minutes correctly. It had not registered them here and now; therefore the shock had jarred it to where it could register them. It had not moved in any of the three dimensions of space; therefore—

The chronometer had gone back in time forty-two minutes, and had registered those minutes in reaching the present again. Or was it only a matter of minutes? The chronometer was an eight-day one. Might it have been twelve hours and forty-two minutes? Forty-eight hours? Ninety-six? A hundred and ninety-two?

And why and how and—the dominant question in Mr. Partridge's mind—could the same device be made to work with a living being?

He had been musing for almost five minutes. It was now nine thirty-seven, and the dial read ten eighteen. Experimenting at random, he switched off the electromagnet, waited a moment, and turned it on again. The chronometer now read eleven o'clock.

Mr. Partridge remarked that he would be damned—a curiously prophetic remark in view of the fact that this great discovery was to turn him into a murderer.

It would be fruitless to relate in detail the many experiments which Mr. Partridge eagerly performed to verify and check his discovery. They were purely empirical in nature, for Mr. Partridge was that type of inventor which is short on theory but long on gadgetry. He did frame a very rough working hypothesis—that the sudden shock had caused the magnetic field to rotate into the temporal dimension, where it set up a certain—he groped for words—a certain negative potential of entropy, which drew things backward in time. But he would leave the doubtless highly debatable theory to the academicians. What he must do was perfect the machine, render it generally usable, and then burst forth upon an astonished world as Harrison Partridge, the first time traveler. His dry little ego glowed and expanded at the prospect.

There were the experiments in artificial shock which produced synthetically the earthquake effect. There were the experiments with the white mice which proved that the journey through time was harmless to life. There were the experiments with the chronometer which established that the time traversed varied directly as the square of the power expended on the electromagnet.

But these experiments also established that the time elapsed had not been twelve hours nor any multiple thereof, but simply forty-two minutes. And with the equipment at his disposal, it was impossible for Mr. Partridge to stretch that period any further than a trifle under two hours.

This, Mr. Partridge told himself, was ridiculous. Time travel at such short range, and only to the past, entailed no possible advantages. Oh, perhaps some piddling ones—once, after the mice had convinced him that he could safely venture himself, he had a lengthy piece of calculation which he wished to finish before dinner. An hour was simply not time enough for it; so at six o'clock he moved himself back to five again, and by working two hours in the space from five to six finished his task easily by dinner time. And one evening when, in his preoccupation, he had forgotten his favorite radio quiz program until it was ending, it was simplicity itself to go back to the beginning and comfortably hear it through.

But though such trifling uses as this might be an important part of the work of the time machine once it was established—possibly the strongest commercial selling point for inexpensive home sets—they were not spectacular or startling enough to make the reputation of the machine and—more important—the reputation of Harrison Partridge.

The Great Harrison Partridge would have untold wealth. He could pension off his sister Agatha and never have to see her again. He would have untold prestige and glamour, despite his fat and his baldness, and the beautiful and aloof Faith Preston would fall into his arms like a ripe plum. He would—

It was while he was indulging in one of these dreams of power that Faith Preston herself entered his workshop. She was wearing a white sports dress and looking so fresh and immaculate that the whole room seemed to glow with her presence. She was all the youth and loveliness that had passed Mr. Partridge by, and his pulse galloped at her entrance.

"I came out here before I saw your sister," she said. Her voice was as cool and bright as her dress. "I wanted you to be the first to know. Simon and I are

going to be married next month."

Mr. Partridge never remembered what was said after that. He imagined that she made her usual comments about the shocking disarray of his shop and her usual polite inquiries as to his current researches. He imagined that he offered the conventional good wishes and extended his congratulations, too, to that damned young whippersnapper Simon Ash. But all his thoughts were that he wanted her and needed her and that the great, the irresistible Harrison Partridge must come into being before next month.

Money. That was it. Money. With money he could build the tremendous machinery necessary to carry a load of power—and money was needed for that power, too—that would produce truly impressive results. To travel back even so much as a quarter of a century would be enough to dazzle the world. To appear at the Versailles peace conference, say, and expound to the delegates the inevitable results of their too lenient—or too strict?—terms. Or with unlimited money to course down the centuries, down the millennia, bringing back lost arts, forgotten secrets—

Money—

"Hm-m-m!" said Agatha. "Still mooning after that girl? Don't be an old fool."

He had not seen Agatha come in. He did not quite see her now. He saw a sort of vision of a cornucopia that would give him money that would give him the apparatus that would give him his time machine that would give him success that would give him Faith.

"If you must moon instead of working—if indeed you call this work—you might at least turn off a few switches," Agatha snapped. "Do you think we're made of money?"

Mechanically he obeyed.

"It makes you sick," Agatha droned on, "when you think how some people spend their money. Cousin Stanley! Hiring this Simon Ash as a secretary for nothing on earth but to look after his library and his collections. So much money he can't do anything but waste it! And all Great-uncle Max's money coming to him too, when we could use it so nicely. If only it weren't for Cousin Stanley, I'd be an heiress. And then—"

Mr. Partridge was about to observe that even as an heiress Agatha would doubtless have been the same intolerant old maid. But two thoughts checked his tongue. One was the sudden surprising revelation that even Agatha had her inner yearnings, too. And the other was an overwhelming feeling of gratitude to her.

"Yes," Mr. Partridge repeated slowly. "If it weren't for Cousin Stanley—"

By means as simple as this, murderers are made.

The chain of logic was so strong that moral questions hardly entered into the situation.

Great-uncle Max was infinitely old. That he should live another year was out of the question. And if his son Stanley were to predecease him, then Harrison and Agatha Partridge would be his only living relatives. And Maxwell Harrison was as infinitely rich as he was infinitely old.

Therefore Stanley must die. His life served no good end. Mr. Partridge understood that there are economic theories according to which conspicuous waste serves its purposes, but he did not care to understand them. Stanley alive was worth nothing. Stanley dead cleared the way for the enriching of the world by one of the greatest discoveries of mankind, which incidentally entailed great wealth and prestige for Mr. Partridge. And—a side issue, perhaps, but nonetheless as influential—the death of Stanley would leave his secretary Simon Ash without a job and certainly postpone his marriage to Faith, leaving her time to realize the full worth of Mr. Partridge.

Stanley must die, and his death must be accomplished with a maximum of personal safety. The means for that safety were at hand. For the one completely practical purpose of a short-range time machine, Mr. Partridge had suddenly realized, was to provide an alibi for murder.

The chief difficulty was in contriving a portable version of the machine which would operate over any considerable period of time. The first model had a traveling range of two minutes. But by the end of a week, Mr. Partridge had constructed a portable time machine which was good for forty-five minutes. He needed nothing more save a sharp knife. There was, Mr. Partridge thought, something crudely horrifying about guns.

That Friday afternoon he entered Cousin Stanley's library at five o'clock. This was an hour when the eccentric man of wealth always devoted himself to quiet and scholarly contemplation of his treasures. The butler, Bracket, had been reluctant to announce him, but "Tell my cousin," Mr. Partridge said, "that I have discovered a new entry for his bibliography."

The most recent of Cousin Stanley's collecting manias was fiction based upon factual murders. He had already built up the definitive library on the subject. Soon he intended to publish the definitive bibliography. And the promise of a new item was an assured open-sesame.

The ponderous gruff joviality of Stanley Harrison's greeting took no heed of the odd apparatus he carried. Everyone knew that Mr. Partridge was a crackpot inventor. That he should be carrying a strange framework of wires and magnets occasioned no more surprise than that an au-

thor should carry a sheaf of manuscript.

"Bracket tells me you've got something for me," Cousin Stanley boomed. "Glad to hear it. Have a drink? What is it?"

"No thank you." Something in Mr. Partridge rebelled at accepting the hospitality of his victim. "A Hungarian friend of mine was mentioning a novel about one Bela Kiss."

"Kiss?" Cousin Stanley's face lit up with a broad beam. "Splendid! Never could see why no one used him before. Woman killer. Landru type. Always fascinating. Kept 'em in empty gasoline tins. Never would have been caught if there hadn't been a gasoline shortage. Constable thought he was hoarding, checked the tins, found corpses. Beautiful! Now if you'll give me the details—"

Cousin Stanley, pencil poised over a P-slip, leaned over the desk. And Mr. Partridge struck.

He had checked the anatomy of the blow, just as he had checked the name of an obscure but interesting murderer. The knife went truly home, and there was a gurgle and the terrible spastic twitch of dying flesh.

Mr. Partridge was now an heir and a murderer, but he had time to be conscious of neither fact. He went through his carefully rehearsed motions, his mind numb and blank. He latched the windows of the library and locked each door. This was to be an impossible crime, one that could never conceivably be proved on him or on any innocent.

Mr. Partridge stood beside the corpse in the midst of the perfectly locked room. It was four minutes past five. He screamed twice, very loudly, in an unrecognizably harsh voice. Then he plugged his portable instrument into a floor outlet and turned a switch.

It was four nineteen. Mr. Partridge unplugged his machine. The room was empty and the door open. Mr. Partridge's gaze went to the desk. He felt, against all reason and knowledge, that there should be blood —some trace at least of what he had already done, of what was not to happen for three quarters of an hour yet.

Mr. Partridge knew his way reasonably well about his cousin's house. He got out without meeting anyone. He tucked the machine into the rumble seat of his car and drove off to Faith Preston's. Toward the end of his long journey across town he carefully drove through a traffic light and received a citation noting the time as four fifty. He reached Faith's at four fifty-four, ten minutes before the murder he had just committed.

Simon Ash had been up all Thursday night cataloguing Stanley Harrison's latest acquisitions. Still he had risen at his usual hour that Friday to get through the morning's mail before his luncheon date with Faith. By four thirty that afternoon he was asleep on his feet.

He knew that his employer would be coming into the library in half an hour. And Stanley Harrison liked solitude for his daily five-o'clock gloating and meditation. But the secretary's work desk was hidden around a corner of the library's stacks, and no other physical hunger can be quite so dominantly compelling as the need for sleep.

Simon Ash's shaggy blond head sank onto the desk. His sleep-heavy hand shoved a pile of cards to the floor, and his mind only faintly registered the thought that they would all have to be alphabetized again. He was too sleepy to think of anything but pleasant things, like the sailboat at Balboa which brightened his week ends, or the hiking trip in the Sierras planned for his next vacation, or above all Faith. Faith the fresh and lovely and perfect, who would be his next month—

There was a smile on Simon's rugged face as he slept. But he woke with a harsh scream ringing in his head. He sprang to his feet and looked out from the stacks into the library.

The dead hulk that slumped over the desk with the hilt protruding from its back was unbelievable, but even more incredible was the other spectacle. There was a man. His back was toward Simon, but he seemed faintly familiar. He stood close to a complicated piece of gadgetry. There was the click of a switch.

Then there was nothing.

Nothing in the room at all but Simon Ash and an infinity of books. And their dead owner.

Ash ran to the desk. He tried to lift Stanley Harrison, tried to draw out the knife, then realized how hopeless was any attempt to revive life in that body. He reached for the phone, then stopped as he heard the loud knocking on the door.

Over the raps came the butler's voice. "Mr. Harrison! Are you all right, sir?" A pause, more knocking, and then, "Mr. Harrison! Let me in, sir! Are you all right?"

Simon raced to the door. It was locked, and he wasted almost a minute groping for the key at his feet, while the butler's entreaties became more urgent. At last Simon opened the door.

Bracket stared at him—stared at his sleep-red eyes, his blood-red hands, and beyond him at what sat at the desk. "Mr. Ash, sir," the butler gasped. "What have you done?"

Faith Preston was home, of course. No such essential element of Mr. Partridge's plan could have been left to chance. She worked best in the late afternoons, she said, when she was getting hungry for dinner; and she was working hard this week on some entries for a national contest in soap carving.

The late-afternoon sun was bright in her room, which you

might call her studio if you were politely disposed, her garret if you were not. It picked out the few perfect touches of color in the scanty furnishings and converted them into bright aureoles surrounding the perfect form of Faith.

The radio was playing softly. She worked best to music, and that, too, was an integral portion of Mr. Partridge's plan.

Six minutes of unmemorable small talk— What are you working on? How lovely! And what have you been doing lately? Pottering around as usual. And the plans for the wedding?—and then Mr. Partridge held up a pleading hand for silence.

"When you hear the tone," the radio announced, "the time will be exactly five seconds before five o'clock."

"I forgot to wind my watch," Mr. Partridge observed casually. "I've been wondering all day exactly what time it was." He set his perfectly accurate watch.

He took a long breath. And now at last he knew that he was a new man. He was at last the Great Harrison Partridge. The last detail of his perfect plan had been checked off. His labors were over. In another four minutes Cousin Stanley would be dead. In another month or so Great-uncle Max would follow, more naturally. Then wealth and the new machine and power and glory and—

Mr. Partridge looked about the sun-bright garret as though he were a newborn infant with a miraculous power of vision and recognition. He was newborn. Not only had he made the greatest discovery of his generation; he had also committed its perfect crime. Nothing was impossible to this newborn Harrison Partridge.

"What's the matter?" Faith asked. "You look funny. Could I make you some tea?"

"No. Nothing. I'm all right." He walked around behind her and looked over her shoulder at the graceful nude emerging from her imprisonment in a cake of soap. "Exquisite, my dear," he observed. "Exquisite."

"I'm glad you like it. I'm never happy with female nudes; I don't think women sculptors ever are. But I wanted to try it."

Mr. Partridge ran a dry hot finger along the front of the soapen nymph. "A delightful texture," he remarked. "Almost as delightful as—" His tongue left the speech unfinished, but his hand rounded out the thought along Faith's cool neck and cheek.

"Why, Mr. Partridge!" She laughed.

The laugh was too much. One does not laugh at the Great Harrison Partridge, time traveler and perfect murderer. There was nothing in his plan that called for what followed. But something outside of any plans brought him to his knees, forced his arms around Faith's lithe body, pressed tumultuous words of incoherent ardor from his unwonted lips.

He saw fear growing in her

eyes. He saw her hand dart out in instinctive defense and he wrested the knife from it. Then his own eyes glinted as he looked at the knife. It was little, ridiculously little. You could never plunge it through a man's back. But it was sharp —a throat, the artery of a wrist—

His muscles had relaxed for an instant. In that moment of nonvigilance, Faith had wrested herself free. She did not look backward. He heard the clatter of her steps down the stairs, and for a fraction of time the Great Harrison Partridge vanished and Mr. Partridge knew only fear. If he had aroused her hatred, if she should not swear to his alibi—

The fear was soon over. He knew that no motives of enmity could cause Faith to swear to anything but the truth. She was honest. And the enmity itself would vanish when she realized what manner of man had chosen her for his own.

It was not the butler who opened the door to Faith. It was a uniformed policeman, who said, "Whaddaya want here?"

"I've got to see Simon . . . Mr. Ash," she blurted out.

The officer's expression changed. "C'mon," and he beckoned her down the long hall.

Faith followed him, not perhaps so confused as she might ordinarily have been by such a reception. If the mild and repressed Mr. Partridge could suddenly change into a ravening wolf, anything was possible. The respectable Mr. Harrison might quite possibly be in some trouble with the police. But she had to see Simon. She needed reassuring, comforting—

The tall young man in plain clothes said, "My name is Jackson. Won't you sit down? Cigarette?" She waved the pack away nervously. "Hinkle says you wanted to speak to Mr. Ash?"

"Yes, I—"

"Are you Miss Preston? His fiancée?"

"Yes." Her eyes widened. "How did you— Oh, has something happened to Simon?"

The young officer looked unhappy. "I'm afraid something has. Though he's perfectly safe at the moment. You see, he— Damn it all, I never have been able to break such news gracefully."

The uniformed officer broke in. "They took him down to headquarters, miss. You see, it looks like he bumped off his boss."

Faith did not quite faint, but the world was uncertain for a few minutes. She hardly heard Lieutenant Jackson's explanations or the message of comfort that Simon had left for her. She simply held very tight to her chair until the ordinary outlines of things came back and she could swallow again.

"Simon is innocent," she said firmly.

"I hope he is." Jackson sounded sincere. "I've never enjoyed pinning a murder on as decent-seeming a fellow as your fiancé. But the case, I'm afraid, is too clear. If he is innocent, he'll have to tell us a more plausible story than his first one. Murderers that turn a switch and vanish into thin air are not highly regarded by most juries."

Faith rose. The world was firm again, and one fact was clear. "Simon is innocent," she repeated. "And I'm going to prove that. Will you please tell me where I can get a detective?"

The uniformed officer laughed. Jackson started to, but hesitated. The threatened guffaw turned into a not unsympathetic smile. "Of course, Miss Preston, the city's paying my salary under the impression that I'm one. But I see what you mean: You want a freer investigator, who won't be hampered by such considerations as the official viewpoint, or even the facts of the case. Well, it's your privilege."

"Thank you. And how do I go about finding one?"

"Acting as an employment agency's a little out of my line. But rather than see you tie up with some shyster shamus, I'll make a recommendation, a man I've worked with, or against, on a half dozen cases. And I think this set-up is just impossible enough to appeal to him. He likes lost causes."

"Lost?" It is a dismal word.

"And in fairness I should add they aren't always lost after he tackles them. The name's O'Breen—Fergus O'Breen."

Mr. Partridge dined out that night. He could not face the harshness of Agatha's tongue. Later he could dispose of her comfortably; in the meanwhile, he would avoid her as much as possible. After dinner he made a round of the bars on the Strip and played the pleasant game of "If only they knew who was sitting beside them." He felt like Harun-al-Rashid, and liked the glow of the feeling.

On his way home he bought the next morning's *Times* at an intersection and pulled over to the curb to examine it. He had expected sensational headlines on the mysterious murder which had the police completely baffled. Instead he read:

SECRETARY SLAYS EMPLOYER

After a moment of shock the Great Harrison Partridge was himself again. He had not intended this. He would not willingly cause unnecessary pain to anyone. But lesser individuals who obstruct the plans of the great must take their medicine. The weakling notion that had crossed his mind of confessing to save this innocent young man —that was dangerous nonsense that must be eradicated from his thoughts.

That another should pay for your murder makes the perfect crime even more perfect. And

if the State chose to dispose of Simon Ash in the lethal-gas chamber—why, it was kind of the State to aid in the solution of the Faith problem.

Mr. Partridge drove home, contented. He could spend the night on the cot in his workshop and thus see that much the less of Agatha. He clicked on the workshop light and froze.

There was a man standing by the time machine. The original large machine. Mr. Partridge's feeling of superhuman self-confidence was enormous but easily undermined, like a vast balloon that needs only the smallest pin prick to shatter it. For a moment he envisioned a scientific master mind of the police who had deduced his method, tracked him here, and discovered his invention.

Then the figure turned.

Mr. Partridge's terror was only slightly lessened. For the figure was that of Mr. Partridge. There was a nightmare instant when he thought of Doppelganger, of Poe's William Wilson, of dissociated personalities, of Dr. Jekyll and Mr. Hyde. Then this other Mr. Partridge cried aloud and hurried from the room, and the entering one collapsed.

A trough must follow a crest. And now blackness was the inexorable aftermath of Mr. Partridge's elation. His successful murder, his ardor with Faith, his evening as Harun-al-Rashid, all vanished, to leave him an abject crawling thing faced with the double fear of madness and detection. He heard horrible noises in the room, and realized only after minutes that they were his own sobs.

Finally he pulled himself to his feet. He bathed his face in cold water from the sink, but still terror gnawed at him. Only one thing could reassure him. Only one thing could still convince him that he was the Great Harrison Partridge. And that was his noble machine. He touched it, carassed it as one might a fine and dearly loved horse.

Mr. Partridge was nervous, and he had been drinking more than his frugal customs allowed. His hand brushed the switch. He looked up and saw himself entering the door. He cried aloud and hurried from the room.

In the cool night air he slowly understood. He had accidentally sent himself back to the time he entered the room, so that upon entering he had seen himself. There was nothing more to it that that. But he made a careful mental note: Always take care, when using the machine, to avoid returning to a time-and-place where you already are. Never meet yourself. The dangers of psychological shock are too great.

Mr. Partridge felt better now. He had frightened himself, had he? Well, he would not be the last to tremble in fear of the Great Harrison Partridge.

Fergus O'Breen, the detective recommended—if you could call it that—by the police lieutenant, had his office in a ramshackle old building at Second and Spring. There were two, she imagined they were clients, in the waiting room ahead of Faith. One looked like the most sodden type of Skid Row loafer, and the elegant disarray of the other could mean nothing but the lower reaches of the upper layers of Hollywood.

The detective, when Faith finally saw him, inclined in costume toward the latter, but he wore sports clothes as though they were pleasantly comfortable, rather than as the badge of a caste. He was a thin young man, with sharpish features and very red hair. What you noticed most were his eyes—intensely green and alive with a restless curiosity. They made you feel that his work would never end until that curiosity had been satisfied.

He listened in silence to Faith's story, not moving save to make an occasional note. He was attentive and curious, but Faith's spirits sank as she saw the curiosity in the green eyes deaden to hopelessness. When she was through, he rose, lit a cigarette, and began pacing about the narrow inner office.

"I think better this way," he apologized. "I hope you don't mind. But what have I got to think about? Look: This is what you've told me. Your young man, this Simon Ash, was alone in the library with his employer. The butler heard a scream. Knocked on the door, tried to get in, no go. Ash unlocks the door from the inside. Police search later shows all other doors and windows likewise locked on the inside. And Ash's prints are on the murder knife. My dear Miss Preston, all that's better than a signed confession for any jury."

"But Simon is innocent," Faith insisted. "I know him, Mr. O'Breen. It isn't possible that he could have done a thing like that."

"I understand how you feel. But what have we got to go on besides your feelings? I'm not saying they're wrong; I'm trying to show you how the police and the court would look at it."

"But there wasn't any reason for Simon to kill Mr. Harrison. He had a good job. He liked it. We were going to get married. Now he hasn't any job or . . . or anything."

"I know." The detective continued to pace. "That's the one point you've got—absence of motive. But they've convicted without motive before this. And rightly enough. Murderers don't always think like the rational man. Anything can be a motive. The most outrageous and fascinating French murder since Landru was committed because the electric toaster didn't work right that morning. But let's look at motives. Mr. Harrison was a wealthy man; where does all that money go?"

"Simon helped draft his will.

It all goes to libraries and foundations and things. A little to the servants, of course—"

"A little can turn the trick. But no near relatives?"

"His father's still alive. He's terribly old. But he's so rich himself that it'd be silly to leave him anything."

Fergus snapped his fingers. "Max Harrison! Of course. The superannuated robber-baron, to put it politely, who's been due to die any time these past ten years. And leave a mere handful of millions. There's a motive for you."

"How so?"

"The murderer could profit from Stanley Harrison's death, not directly if all his money goes to foundations, but indirectly from his father. Combination of two classic motives—profit and elimination. Who's next in line for old man Harrison's fortune?"

"I'm not sure. But I do know two people who are sort of second cousins or something. I think they're the only living relatives. Agatha and Harrison Partridge." Her eyes clouded a little as she mentioned Mr. Partridge and remembered his strange behavior yesterday.

Fergus' eyes were brightening again. "At least it's a lead. Simon Ash had no motive and one Harrison Partridge had a honey. Which proves nothing, but gives you some place to start."

"Only—" Faith protested. "Only Mr. Partridge couldn't possibly have done it either."

Fergus stopped pacing. "Look, madam. I am willing to grant the unassailable innocence of one suspect on a client's word. Otherwise I'd never get clients. But if every individual who comes up is going to turn out to be someone in whose pureness of soul you have implicit faith and—"

"It isn't that. Not just that. Of course I can't imagine Mr. Partridge doing a thing like that—"

"You never can tell," said Fergus a little grimly. "Some of my best friends have been murderers."

"But the murder was just after five o'clock, the butler says. And Mr. Partridge was with me then, and I live way across town from Mr. Harrison's."

"You're sure of the time?"

"We heard the five-o'clock radio signal and he set his watch." Her voice was troubled and she tried not to remember the awful minutes afterward.

"Did he make a point of it?"

"Well . . . we were talking and he stopped and held up his hand and we listened to the bong."

"Hm-m-m." This statement seemed to strike the detective especially. "Well, there's still the sister. And anyway, the Partridges give me a point of departure, which is what I needed."

Faith looked at him hopefully. "Then you'll take the case?"

"I'll take it. God knows why. I don't want to raise your hopes, because if ever I saw an unpromising set-up it's this. But I'll take it. I think it's because I can't resist the pleasure of having a detective lieutenant shove a case into my lap."

"Bracket, was it usual for that door to be locked when Mr. Harrison was in the library?"

The butler's manner was imperfect; he could not decide whether a hired detective was a gentleman or a servant. "No," he said, politely enough but without a "sir." "No, it was most unusual."

"Did you notice if it was locked earlier?"

"It was not. I showed a visitor in shortly before the . . . before this dreadful thing happened."

"A visitor?" Fergus' eyes glinted. He began to have visions of all the elaborate possibilities of locking doors from the outside so that they seem locked on the inside. "And when was this?"

"Just on five o'clock, I thought. But the gentleman called here today to offer his sympathy, and he remarked, when I mentioned the subject, that he believed it to have been earlier."

"And who was this gentleman?"

"Mr. Harrison Partridge."

Hell, thought Fergus. There goes another possibility. It must have been much earlier if he was at Faith Preston's by five. And you can't tamper with radio time signals as you might with a clock. However— "Notice anything odd about Mr. Partridge? Anything in his manner?"

"Yesterday? No, I did not. He was carrying some curious contraption—I hardly noticed what. I imagine it was some recent invention of his which he wished to show to Mr. Harrison."

"He's an inventor, this Partridge? But you said yesterday. Anything odd about him today?"

"I don't know. It's difficult to describe. But there was something about him as though he had changed—grown, perhaps."

"Grown up?"

"No. Just grown."

"Now, Mr. Ash, this man you claim you saw—"

"Claim! Damn it, O'Breen, don't you believe me either?"

"Easy does it. The main thing for you is that Miss Preston believes you, and I'd say that's a lot. And I'm doing my damnedest to substantiate her belief. Now this man you saw, if that makes you any happier in this jail, did he remind you of anyone? Was there any suggestion—"

"I don't know. It's bothered me. I didn't get a good look, but there was something familiar—"

"You say he had some sort of machine beside him?"

Simon Ash was suddenly ex-

cited. "You've got it. That's it."

"That's what?"

"Who it was. Or who I thought it was. Mr. Partridge. He's some sort of a cousin of Mr. Harrison's. Screwball inventor."

"Miss Preston, I'll have to ask you more questions. Too many signposts keep pointing one way, and even if that way's a blind alley I've got to go up it. When Mr. Partridge called on you yesterday afternoon, what did he do to you?"

"Do to me?" Faith's voice wavered. "What on earth do you mean?"

"It was obvious from your manner earlier that there was something about that scene you wanted to forget. I'm afraid it'll have to be told. I want to know everything I can about Mr. Partridge, and particularly Mr. Partridge yesterday."

"He— Oh, no, I can't. Must I tell you, Mr. O'Breen?"

"Simon Ash says the jail is not bad after what he's heard of jails, but still—"

"All right. I'll tell you. But it was strange. I . . . I suppose I've known for a long time that Mr. Partridge was—well, you might say in love with me. But he's so much older than I am and he's very quiet and never said anything about it and—well, there it was, and I never gave it much thought one way or another. But yesterday— It was as though . . . as though he were possessed. All at once it seemed to burst out and there he was making love to me. Frightfully, horribly. I couldn't stand it. I ran away." Her slim body shuddered now with the memory. "That's all there was to it. But it was terrible."

"You pitched me a honey this time, Andy."

Lieutenant Jackson grinned. "Thought you'd appreciate it, Fergus."

"But look: What have you got against Ash but the physical set-up of a locked room? The oldest cliché in murderous fiction, and not unheard of in fact. 'Locked rooms' can be unlocked. Remember the Carruthers case?"

"Show me how to unlocked this one and your Mr. Ash is a free man."

"Set that aside for the moment. But look at my suspect, whom we will call, for the sake of novelty, X. X is a mild-mannered, inoffensive man who stands to gain several million by Harrison's death. He shows up at the library just before the murder. He's a crackpot inventor, and he has one of his gadgets with him. He shows an alibi-conscious awareness of time. He tries to get the butler to think he called earlier. He calls a witness' attention ostentatiously to a radio time signal. And most important of all, psychologically, he changes. He stops being mild-mannered and inoffensive. He goes on the make for a girl with physical violence. The butler describes him as a different man; he's grown."

Jackson nodded. "It's a good case. And the inventor's gadget, I suppose, explains the locked room?"

"Probably, when we learn what it was. You've got a good mechanical mind, Andy. That's right up your alley."

Jackson drew a note pad toward him. "Your X sounds worth questioning, to say the least. But this reticence isn't like you, Fergus. Why all this innuendo? Why aren't you telling me to get out of here and arrest him?"

Fergus was not quite his cocky self. "Because you see, that alibi I mentioned—well, it's good. I can't crack it. It's perfect."

Lieutenant Jackson shoved the pad away. "Run away and play," he said wearily.

"It couldn't be phony at the other end?" Fergus urged. "Some gadget planted to produce those screams at five o'clock to give a fake time for the murder?"

Jackson shook his head. "Harrison finished tea around four thirty. Stomach analysis shows the food had been digested just about a half-hour. No, he died at five o'clock, all right."

"X's alibi's perfect, then," Fergus repeated. "Unless . . . unless—" His green eyes blinked with amazed realization. "Oh, my dear God—" he said softly.

"Unless what?" Jackson demanded. There was no answer. It was the first time in history that the lieutenant had ever seen The O'Breen speechless.

Mr. Partridge was finding life pleasant to lead. Of course this was only a transitional stage. At present he was merely the—what was the transitional stage between cocoon and fully developed insect? Larva? Imago? Pupa? Outside of his own electro-inventive field, Mr. Partridge was not a well-informed man. That must be remedied. But let the metaphor go. Say simply that he was now in the transition between the meek worm that had been Mr. Partridge and the Great Harrison Partridge who would emerge triumphant when Great-uncle Max died and Faith forgot that poor foolish doomed young man.

Even Agatha he could tolerate more easily in this pleasant state, although he had nonetheless established permanent living quarters in his workroom. She had felt her own pleasure at the prospect of being an heiress, but had expressed it most properly by buying sumptuous mourning for Cousin Stanley—the most expensive clothes that she had bought in the past decade. And her hard edges were possibly softening a little—or was that the pleasing haze, almost like that of drunkenness, which now tended to soften all hard edges for Mr. Partridge's delighted eyes?

Life possessed pleasures that he had never dreamed of before.

The pleasure, for instance, of his visit to the dead man's house to pay his respects, and to make sure that the butler's memory of time was not too accurately fixed. Risky, you say? Incurring the danger that one might thereby only fix it all the more accurately? For a lesser man, perhaps yes; but for the newly nascent Great Harrison Partridge a joyous exercise of pure skill.

It was in the midst of some such reverie as this that Mr. Partridge, lolling idly in his workshop with an unaccustomed tray of whiskey, ice and siphon beside him, casually overheard the radio announce the result of the fourth race at Hialeah and noted abstractedly that a horse named Karabali had paid forty-eight dollars and sixty cents on a two-dollar ticket. He had almost forgotten the only half-registered fact when the phone rang.

He answered, and a grudging voice said, "You can sure pick 'em. That's damned near five grand you made on Karabali."

Mr. Partridge fumbled with vocal noises.

The voice went on, "What shall I do with it? Want to pick it up tonight or—"

Mr. Partridge had been making incredibly rapid mental calculations. "Leave it in my account for the moment," he said firmly. "Oh, and—I'm afraid I've mislaid your telephone number."

"Trinity 2897. Got any more hunches now?"

"Not at the moment. I'll let you know."

Mr. Partridge replaced the receiver and poured himself a stiff drink. When he had downed it, he went to the machine and traveled two hours back. He returned to the telephone, dialed TR 2897, and said, "I wish to place a bet on the fourth race at Hialeah."

The same voice said, "And who're you?"

"Partridge. Harrison Partridge."

"Look, brother. I don't take bets by phone unless I see some cash first, see?"

Mr. Partridge hastily recalculated. As a result the next half hour was as packed with action as the final moments of his great plan. He learned about accounts, he ascertained the bookmaker's address, he hurried to his bank and drew out an impressive five hundred dollars which he could ill spare, and he opened his account and placed a two-hundred-dollar bet which excited nothing but a badly concealed derision.

Then he took a long walk and mused over the problem. He recalled happening on a story once in some magazine which proved that you could not use knowledge from the future of the outcome of races to make your fortune, because by interfering with your bet you would change the odds and alter the future. But he was not plucking from the future; he was going back into the past. The odds he had heard were already affected by what he had done. From his subjective point of view, he learned the result of his actions before he performed them. But in the objective physical temporospatial world, he performed those actions quite normally and correctly before their results.

It was perfect—for the time being. It could not, of course, be claimed as one of the general commercial advantages of the time machine. Once the Partridge principle became common knowledge, all gambling would inevitably collapse. But for this transitional stage it was ideal. Now, while he was waiting for Great-uncle Max to die and finance his great researches, Mr. Partridge could pass his time waiting for the telephone to inform him of the brilliant coup he had made. He could quietly amass an enormous amount of money and—

Mr. Partridge stopped dead on the sidewalk and a strolling couple ran headlong into him. He scarcely noticed the collision. He had had a dreadful thought. The sole acknowledged motive for his murder of Cousin Stanley had been to secure money for his researches. Now he learned that his machine, even in its present imperfect form, could provide him with untold money.

He had never needed to murder at all.

"My dearest Maureen," Fergus announced at the breakfast table, "I have discovered the world's first successful time machine."

His sister showed no signs of being impressed. "Have some more tomato juice," she suggested. "Want some tabasco in it? I didn't know that the delusions could survive into the hangover."

"But Macushla," Fergus protested, "you've just listened to an announcement that no woman on earth has ever heard before."

"Fergus O'Breen, Mad Scientist." Maureen shook her head. "It isn't a role I'd cast you for. Sorry."

"If you'd listen before you crack wise, I said 'discovered.' Not 'invented.' It's the damnedest thing that's ever happened to me in business. It hit me in a flash while I was talking to Andy. It's the perfect and only possible solution to a case. And who will ever believe me? Do you wonder that I went out and saturated myself last night?"

Maureen frowned. "You mean this? Honest and truly?"

"Black and bluely, my sweeting, and all the rest of the childish rigmarole. It's the McCoy. Listen." And he briefly outlined the case. "Now what sticks out like a sore thumb is this: Harrison Partridge establishing an alibi. The radio time signal, the talk with the butler— I'll even lay odds that the murderer himself gave those screams so there'd be no question as to time of death. Then you rub up against the fact that the alibi, like the horrendous dream of the young girl from Peru, is perfectly true.

"But what does an alibi mean? It's my own nomination for the

most misused word in the language. It's come to mean a disproof, an excuse. But strictly it means nothing, but *elsewhere*. You know the classic gag: 'I wasn't there, this isn't the woman, and, anyway, she gave in.' Well, of those three redundant excuses, only the first is an alibi, an *elsewhere* statement. Now Partridge's claim of being elsewhere is true enough. He hasn't been playing with space, like the usual alibi builder. And even if we could remove him from elsewhere and put him literally on the spot, he could say: 'I couldn't have left the room after the murder; the doors were all locked on the inside.' Sure he couldn't—not *at that time*. And his excuse is not an *elsewhere*, but an *elsewhen*."

Maureen refilled his coffee cup and her own. "Hush up a minute and let me think it over." At last she nodded slowly. "And he's an eccentric inventor and when the butler saw him he was carrying one of his gadgets."

"Which he still had when Simon Ash saw him vanish. He committed the murder, locked the doors, went back in time, walked out through them in their unlocked past, and went off to hear the five-o'clock radio bong at Faith Preston's."

"But you can't try to sell the police on that. Not even Andy. He wouldn't listen to—"

"I know. Damn it, I know. And meanwhile that Ash, who seems a hell of a good guy—our kind of people, Maureen—sits there with the surest reserved booking for the lethal-gas chamber I've ever seen."

"What are you going to do?"

"I'm going to see Mr. Harrison Partridge. And I'm going to ask for an encore."

"Quite an establishment you've got here," Fergus observed to the plump bald little inventor.

Mr. Partridge smiled courteously. "I amuse myself with my small experiments," he admitted.

"I'm afraid I'm not much aware of the wonders of modern science. I'm looking forward to the more spectacular marvels, spaceships for instance, or time machines. But that wasn't what I came to talk about. Miss Preston tells me you're a friend of hers. I'm sure you're in sympathy with this attempt of hers to free young Ash."

"Oh, naturally. Most naturally. Anything that I can do to be of assistance—"

"It's just the most routine sort of question, but I'm groping for a lead. Anything that might point out a direction for me. Now, aside from Ash and the butler, you seem to have been the last person to see Harrison alive. Could you tell me anything about him? How was he?"

"Perfectly normal, so far as I could observe. We talked about a new item which I had unearthed for his bibliography, and he expressed some small dissatisfaction with Ash's cataloguing of late. I believe they had had words on the matter earlier."

"Nothing wrong with Harrison? No . . . no depression?"

"You're thinking of suicide? My dear young man, that hare won't start, I'm afraid. My cousin was the last man on earth to contemplate such an act."

"Bracket says you had one of your inventions with you?"

"Yes, a new, I thought, and highly improved frame for photostating rare books. My cousin, however, pointed out that the same improvements had recently been made by an Austrian *emigré* manufacturer. I abandoned the idea and reluctantly took apart my model."

"A shame. But I suppose that's part of the inventor's life, isn't it?"

"All too true. Was there anything else you wished to ask me?"

"No. Nothing really." There was an awkward pause. The smell of whiskey was in the air, but Mr. Partridge proffered no hospitality. "Funny the results a murder will have, isn't it? To think how this frightful fact will benefit cancer research."

"Cancer research?" Mr. Par-

tridge wrinkled his brows. "I did not know that that was among Stanley's beneficiaries."

"Not your cousin's, no. But Miss Preston tells me that old Max Harrison has decided that since his only direct descendant is dead, his fortune might as well go to the world. He's planning to set up a medical foundation to rival Rockefeller's, and specializing in cancer. I know his lawyer slightly; he mentioned he's going out there tomorrow."

"Indeed," said Mr. Partridge evenly.

Fergus paced. "If you can think of anything, Mr. Partridge, let me know. I've got to clear Ash. I'm convinced he's innocent, but if he is, then this seems like the perfect crime at last. A magnificent piece of work, if you can look at it like that." He looked around the room. "Excellent small workshop you've got here. You can imagine almost anything coming out of it."

"Even," Mr. Partridge ventured, "your spaceships and time machines?"

"Hardly a spaceship," said Fergus.

Mr. Partridge smiled as the young detective departed. He had, he thought, carried off a difficult interview in a masterly fashion. How neatly he had slipped in that creative bit about Stanley's dissatisfaction with Ash! How brilliantly he had improvised a plausible excuse for the machine he was carrying!

Not that the young man could have suspected anything. It was patently the most routine visit. It was almost a pity that this was the case. How pleasant it would be to fence with a detective—master against master. To have a Javert, a Porfir, a Maigret on his trail and to admire the brilliance with which the Great Harrison Partridge should baffle him.

Perhaps the perfect criminal should be suspected, even known, and yet unattainable—

The pleasure of this parrying encounter confirmed him in the belief that had grown in him overnight. It is true that it was a pity that Stanley Harrison had died needlessly. Mr. Partridge's reasoning had slipped for once; murder for profit had not been an essential part of the plan.

And yet what great work had ever been accomplished without death? Does not the bell ring the truer for the blood of the hapless workman? Did not the ancients wisely believe that greatness must be founded upon a sacrifice? Not self-sacrifice, in the stupid Christian perversion of that belief, but a true sacrifice of another's flesh and blood.

So Stanley Harrison was the needful sacrifice from which should arise the Great Harrison Partridge. And were its effects not already visible? Would he be what he was today, would he so much as have emerged from the cocoon, purely by virtue of his discovery?

No, it was his great and irretrievable deed, the perfection of his crime, that had molded him. In blood is greatness.

That ridiculous young man, prating of the perfection of the crime and never dreaming that—

Mr. Partridge paused and reviewed the conversation. There had twice been that curious insistence upon time machines. Then he had said—what was it?—"the crime was a magnificent piece of work," and then, "you can imagine almost anything coming out of this workshop." And the surprising news of Great-uncle Max's new will—

Mr. Partridge smiled happily. He had been unpardonably dense. Here was his Javert, his Porfir. The young detective did indeed suspect him. And the reference to Max had been a temptation, a trap. The detective could not know how unnecessary that fortune had now become. He had thought to lure him into giving away his hand by an attempt at another crime.

And yet, was any fortune ever unnecessary? And a challenge like that—so direct a challenge—could one resist it?

Mr. Partridge found himself considering all the difficulties. Great-uncle Max would have to be murdered today, if he planned on seeing his lawyer tomorrow. The sooner the better. Perhaps his habitual after-lunch siesta would be the best time. He was always alone then, dozing in his favorite corner of that large estate in the hills.

Bother! A snag. No electric plugs there. The portable model was out. And yet— Yes, of course. It could be done the other way. With Stanley, he had committed his crime, then gone back and prepared his alibi. But here he could just as well establish the alibi, then go back and commit the murder, sending himself back by the large machine here with wider range. No need for the locked-room effect. That was pleasing, but not essential.

An alibi for one o'clock in the afternoon. He did not care to use Faith again. He did not want to see her in his larval stage. He would let her suffer through her woes for that poor devil Ash, and then burst upon her in his glory as the Great Harrison Partridge. A perfectly reliable alibi. He might obtain another traffic ticket, though he had not yet been forced to produce his first one. Surely the police would be as good as—

The police. But how perfect. Ideal. To go to headquarters and ask to see the detective working on the Harrison case. Tell him, as a remembered afterthought, about Cousin Stanley's supposed quarrel with Ash. Be with him at the time Great-uncle Max is to be murdered.

At twelve thirty Mr. Partridge left his house for the central police station.

There was now no practical need for him to murder Maxwell Harrison. He had, in fact, not completely made up his mind to

do so. But he was taking the first step in his plan.

Fergus could hear the old man's snores from his coign of vigilance. Getting into Maxwell Harrison's hermitlike retreat had been a simple job. The newspapers had for years so thoroughly covered the old boy's peculiarities that you knew in advance all you needed to know—his daily habits, his loathing for bodyguards, his favorite spot for napping.

His lack of precautions had up till now been justified. Servants guarded whatever was of value in the house; and who would be so wanton as to assault a man nearing his century who carried nothing of value on his person? But now—

Fergus had sighed with more than ordinary relief when he reached the spot and found the quarry safe. It would have been possible, he supposed, for Mr. Partridge to have gone back from his interview with Fergus for the crime. But the detective had banked on the criminal's disposition to repeat himself—commit the crime, in this instance, first, and then frame the *elsewhen*.

The sun was warm and the hills were peaceful. There was a purling stream at the deep bottom of the gully beside Fergus. Old Maxwell Harrison did well to sleep in such perfect solitude.

Fergus was on his third cigarette before he heard a sound. It was a very little sound, the turning of a pebble, perhaps; but here in this loneliness any sound that was not a snore or a stream seemed infinitely loud.

Fergus flipped his cigarette into the depths of the gully and moved, as noiselessly as was possible, toward the sound, screening himself behind scraggly bushes.

The sight, even though expected, was nonetheless startling in this quiet retreat: a plump bald man of middle age advancing on tiptoe with a long knife gleaming in his upraised hand.

Fergus flung himself forward. His left hand caught the knife-brandishing wrist and his right pinioned Mr. Partridge's other arm behind him. The face of Mr. Partridge, that had been so bland a mask of serene exaltation as he advanced to his prey, twisted itself into something between rage and terror.

His body twisted itself, too. It was an instinctive, untrained movement, but timed so nicely by accident that it tore his knife hand free from Fergus' grip and allowed it to plunge downward.

The twist of Fergus' body was deft and conscious, but it was not quite enough to avoid a stinging flesh wound in the shoulder. He felt warm blood trickling down his back. Involuntarily he released his grip on Mr. Partridge's other arm.

Mr. Partridge hesitated for a moment, as though uncertain whether his knife should taste of Great-uncle Max or first dispose of Fergus. The hesitation was understandable, but fatal. Fergus sprang forward in a flying tackle aimed at Mr. Partridge's knees. Mr. Partridge lifted his foot to kick that advancing green-eyed face. He swung and felt his balance going. Then the detective's shoulder struck him. He was toppling, falling over backward, falling, falling—

The old man was still snoring when Fergus returned from his climb down the gully. There was no doubt that Harrison Partridge was dead. No living head could loll so limply on its neck.

And Fergus had killed him. Call it an accident, call it self-defense, call it what you will. Fergus had brought him to a trap, and in that trap he had died.

The brand of Cain may be worn in varying manners. To Mr. Partridge it had assumed the guise of an inspiring panache, a banner with a strange device. But Fergus wore his brand with a difference.

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The shock of guilt did not bite too deeply into his conscience. He had brought about inadvertently and in person what he had hoped to bring the State to perform with all due ceremony. Human life, to be sure, is sacred; but believe too strongly in that precept, and what becomes of capital punishment or of the noble duties of war?

He could not blame himself morally, perhaps, for Mr. Partridge's death. But he could blame himself for professional failure in that death. He had no more proof than before to free Simon Ash, and he had burdened himself with a killing. A man killed at your hand in a trap of your devising—what more sure reason could deprive you of your license as a detective? Even supposing, hopefully, that you escaped a murder rap.

For murder can spread in concentric circles, and Fergus O'Breen, who had set out to trap a murderer, now found himself being one.

Fergus hesitated in front of Mr. Partridge's workshop. It was his last chance. There might be evidence here—the machine itself or some document that could prove his theory even to the skeptical eye of Detective Lieutenant A. Jackson. Housebreaking would be a small offense to add to his record now. The window on the left, he thought—

"Hi!" said Lieutenant Jackson cheerfully. "You on his trail, too?"

Fergus tried to seem his usual jaunty self. "Hi, Andy. So you've finally got around to suspecting Partridge?"

"Is he your mysterious X? I thought he might be."

"And that's what brings you out here?"

"No. He roused my professional suspicions all by himself. Came into the office an hour ago with the damnedest cock-and-bull story about some vital evidence he'd forgotten. Stanley Harrison's last words, it seems, were about a quarrel with Simon Ash. It didn't ring good—seemed like a deliberate effort to strengthen the case against Ash. As soon as I could get free, I decided to come out and have a further chat with the lad."

"I doubt if he's home," said Fergus.

"We can try." Jackson rapped on the door of the workshop. It was opened by Mr. Partridge.

Mr. Partridge held in one hand the remains of a large open-face ham sandwich. When he had opened the door, he picked up with the other hand the remains of a large whiskey and soda. He needed sustenance before this bright new adventure, this greater-than-perfect crime, because it arose from no needful compulsion and knew no normal motive.

Fresh light gleamed in his eyes as he saw the two men standing there. His Javert! Two Javerts! The unofficial detective who had so brilliantly challenged him, and the official one who was to provide his alibi. Chance was happy to offer him this further opportunity for vivid daring.

He hardly heeded the opening words of the official detective nor the look of dazed bewilderment on the face of the other. He opened his lips and the Great Harrison Partridge, shedding the last vestigial vestments of the cocoon, spoke:

"You may know the truth for what good it will do you. The life of the man Ash means nothing to me. I can triumph over him even though he live. I killed Stanley Harrison. Take that statement and do with it what you can. I know that an uncorroborated confession is useless to you. If you can prove it, you may have me. And I shall soon commit another sacrifice, and you are powerless to stop me. Because, you see, you are already too late." He laughed softly.

Mr. Partridge closed the door and locked it. He finished the sandwich and the whiskey, hardly noticing the poundings on the door. He picked up the knife and went to his machine. His face was a bland mask of serene exaltation.

Fergus for the second time was speechless. But Lieutenant Jackson had hurled himself against the door, a second too late. It was a matter of minutes before he and a finally aroused Fergus had broken it down.

"He's gone," Jackson stated puzzledly. "There must be a trick exit somewhere."

"'Locked room,'" Fergus murmured. His shoulder ached, and the charge against the door had set it bleeding again.

"What's that?"

"Nothing. Look, Andy. When do you go off duty?"

"Strictly speaking, I'm off now. I was making this check-up on my own time."

"Then let us, in the name of seventeen assorted demigods of drunkenness, go drown our confusions."

Fergus was still asleep when Lieutenant Jackson's phone call came the next morning. His sister woke him, and watched him come into acute and painful wakefulness as he listened, nodding and muttering, "Yes," or, "I'll be—"

Maureen waited till he had hung up, groped about, and found and lighted a cigarette. Then she said, "Well?"

"Remember that Harrison case I was telling you about yesterday?"

"The time-machine stuff? Yes."

"My murderer, Mr. Partridge—they found him in a gully out on his great-uncle's estate. Apparently slipped and killed himself while attempting his second murder—that's the way Andy sees it. Had a knife with him. So, in view of that and a sort of confession he made yesterday,

Andy's turning Simon Ash loose. He still doesn't see how Partridge worked the first murder, but he doesn't have to bring it into court now."

"Well? What's the matter? Isn't that fine?"

"Matter? Look, Maureen macushla. I killed Partridge. I didn't mean to, and maybe you could call it justifiable; but I did. I killed him at one o'clock yesterday afternoon. Andy and I saw him at two; he was then eating a ham sandwich and drinking whiskey. The stomach analysis proves that he died half an hour after that meal, when I was with Andy starting out on a bender of bewilderment. So you see?"

"You mean he went back afterward to kill his uncle and then you . . . you saw him after you'd killed him only before he went back to be killed? Oh, how awful."

"Not just that, my sweeting. This is the humor of it: The time alibi, the elsewhen that gave the perfect cover up for Partridge's murder—it gives exactly the same ideal alibi to his own murderer."

Maureen started to speak and stopped. "Oh!" she gasped.

"What?"

"The time machine. It must still be there—somewhere—mustn't it? Shouldn't you—"

Fergus laughed, and not at comedy. "That's the payoff of perfection on this opus. I gather Partridge and his sister didn't love each other too dearly. You know what her first reaction was to the news of his death? After one official tear and one official sob, she went and smashed the hell out of his workshop."

On a workshop floor lay twisted, shattered coils and busbars. In the morgue lay a plump bald body with a broken neck. These remained of the Great Harrison Partridge.

THE END.

BOOK REVIEW

ROCKET TO THE MORGUE, by H. H. Holmes. Duell, Sloan & Pearce, $2.00.

This is not a science-fiction yarn; it's straightforward whodunnit, by a whodunnit regular, author of several such. As a mystery novel, it doesn't get a review in Astounding's pages. But—H. H. Holmes is writing for us now, a result of having joined the Manana Literary Society, the group of fantasy and science-fiction writers that centered around Bob Heinlein's home in Hollywood before Pearl Harbor. And the story, straight murder mystery that it is—is laid in and about the Manana Literary Society. Half a dozen of your favorite authors and mine are prime characters in the book. Somewhat disguised, somewhat blended and somewhat distorted by the inexorable necessities of a mystery yarn; you've got to have a couple of villains, and several suspicious characters. The only science-fictionry in the story is the murder method—a rocket does help the victim on his way to the morgue. But that's as it should be; if the author were free to pull any imaginative gadget out of his hat, neither the detective nor the reader would stand a chance of solving it.

This yarn's beauty, from the science-fictionist's viewpoint, is in the characters involved. Knowing the group, I can state that the Manana Literary Society scenes have the air of being straight reporting rather than fiction. A number of the incidents mentioned happened that way, though not always to the characters accredited. The necessity of compression of several people into one "character" changes them a little, but the feel of the whole setup is perfect.

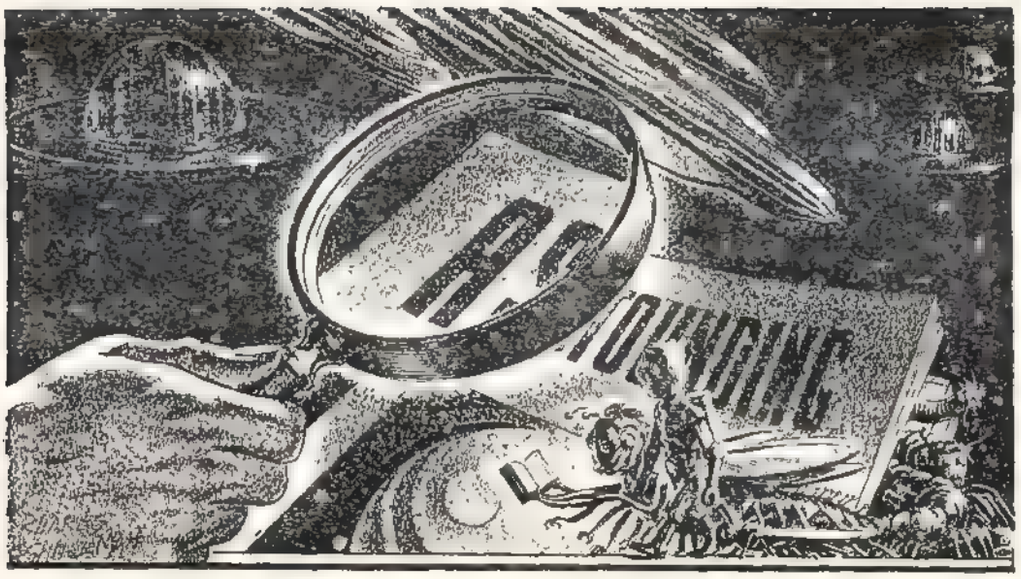
If you know the members of the M. L. S., you need the book. If you know them only through their writing, you can meet them. And if you read Astounding, you know them that way—Bob Heinlein, Cleve Cartmill, Anthony Boucher, Anson MacDonald, Roby Wentz, Lewis Padgett, Will Stewart, Henry Kuttner and C. L. Moore, who is Mrs. Kuttner, Jack Williamson, Edmond Hamilton and half a dozen others.

The basis of the story is the literary profiteering of one Hilary Foulkes, sole controller of the literary estate of his late, great father, Fowler Foulkes, author of the Dr. Derringer stories. The Dr. Derringer stories being early science-fiction stories that made a tremendous impression, widely known all over the world. But Hilary Foulkes is sitting tight on the copyrights, charging outrageous and disastrous fees for the use of anything associated with the works of his father. The result is that every writer, agent and editor in the field feels that a fatal accident would bring about a great improvement in Hilary. Since all the members of the Manana Literary Society are active in the field, and each has been directly damaged by some action of the foppish and tight-fisted Hilary, every member is open to suspicion when Hilary starts getting presents of candied cyanide and packages that tick.

Which means that the detective—and hence the reader—is exposed to the Manana Literary Society in full action. Since H. H. Holmes is himself a recently joined member, it's a good analysis of what makes science-fiction, and why.

Oh, incidentally—it's a first-rate murder mystery, too.

JWC Jr.



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5. "Twonky"—Clever.
6. "Starvation"—Good of its type.
7. Article—Interesting.

Cover and inside pics, good. The new artists are developing in good shape. However, none in this issue I would especially want for my collection. Timmins doing nice cover work.

Hope no more of my fan friends get in the service—I have to get four copies every month now—and that's money. —E. Everett Evans, 191 Capital Avenue, S. W., Battle Creek, Michigan.

With a temperature range of over 100°F. from day to night, Mars' atmosphere is pretty apt to be hectic!

Dear Mr. Campbell:

I have just finished the November issue of Astounding Science-Fiction and felt that I must comment on the magazine.

We'll start with the cover. I must admit that I was one of those who complained at the appearance of a Hubert Rogers cover on every issue for a year and a half, but after seeing the sketchy illustration on this month's mag by Modest Stein, I cry for Rogers again. I am sorry he is in the army. And the illustrators—Kolliker and Kramer. Enuff said.

But now for the contents, and that is a different matter. "Overthrow" is well written, and although the plot is not new in any way, the handling of the story makes it rank as the second best in the issue. First, of course, is "Not Only Dead Men." Von Vogt really scores a topper with this one. I was afraid for a while that he had become the crank-turner for ASF in the absence of Anson MacHeinlein, de Camp and Asimov. I see now that I was wrong, with this well-written, and above all, interesting story. What I mean by interesting is that, while I like to exercise my mind with some of these mental jigsaw puzzles of brain-teasers, I am not able to digest story after story of this type issue after issue. I can't help but feel that most of the stories in recent issues have only increased my admiration of your writers' cleverness. I long for the old emotional story and for the "good old days" of heroes and heroines. Don't misunderstand me, I like a clever intellectual story as well as the next fellow, but I am not able to "lose myself" in this type of story, but can only say, "What a clever story."

But to go on: "The Gentle Pirates" was a fine bit of work, in that, while the situation was only a problem, was handled well to give this third place in my estimation. "Sand" was fourth. I wonder though, Mr. Campbell, about the continual sandstorms. According to astronomers the atmosphere of Mars is very much less dense than our own—approximately twenty percent, I believe. Could such an atmosphere be disturbed to such an extent that sandstorms, of the proportions mentioned in the story, would occur constantly? "Minus Sign" and "Four Little Ships" finish in that order. I am glad to see Murray Leinster back after six years, but I should also like him to write stories as he did then, also. The tales for "Probability Zero!" rank in the following order. "Avenue of Escape," "A Matter of Eclipses," and "The Sleep That Slaughtered."

I am eagerly awaiting the appearance of the fourth Lensman story, for at the recent Second

Annual Michiconference, I had the pleasure of meeting E. E. Smith and of listening to the outline of his next yarn. It seems as if the first three stories were only a prelude to this fourth one. From the discussion of the previous stories, I realized I had missed something by hasty reading; as it seems necessary to study a Smith story, rather than just read it. Needless to say, I reread all the previous Lensman stories upon my return home to Minneapolis.

Here's to Astounding, and to more staples, as there was only one in my copy.—Manson Brackney, 152 Arthur Avenue, S. E., Minneapolis, Minnesota.

Stewart's too busy teaching the Japs what "So sorry" really means to be able to write.

Dear Mr. Campbell:

Here's how the stories in the November Astounding rate:

First place, for my money, goes to Stewart's "Minus Sign." Very interesting, very interesting! I believe this is about the first story I've ever read with the theory of negative time in it, and since I go for new ideas in a big way, naturally the story ranks first. Maybe Stewart can cook up still a new kind of extraterrene matter in future stories. I certainly hope so.

Second place goes to Cartmill for "Overthrow." Not much to say about this except that I like stories about future civilizations and this was no exception.

As for the short stories, I'd probably rate them thus:

3. "Not Only Dead Men,"
4. "The Gentle Pirates,"
5. "Four Little Ships,"
6. "Sand."

Both articles were quite interesting. All in all, the November issue doesn't rate as high as have some previous issues.

And I still think that Astounding is about as poorly an illustrated magazine as can be found on the stands. Even the cover was poor this time. You're really going to miss Rogers. How about returning Wesso and Brown to the covers? They always seemed to do their best work for Astounding. Graves Gladney might do some good work for you, too.

Maybe I'd better vote for the Probability Zero yarns so here goes: "Avenue of Escape," "The Sleep That Slaughtered," and "Eureka!" are the three best in that order.

Well, you ask us if we'd like to see more war stories. I say "No!" Let's fight this war in actuality, not in fiction. After all that's all we hear about and read about, so let's save our magazine for "avenues of escape." Now don't get me wrong. It isn't that I want to get away from all mention of this war, but the thing is that too often time proves the ideas in the story silly. Witness "Final Blackout," but if you can get another story as powerful as that one, I say print it even though it might be all wrong in its political aspects.

That's all, I guess. The editorial was interesting, as always; book review, ample, et cetera.—Arthur Saha, 2828½ Third Avenue E., Hibbing, Minnesota.

Suppose the machine projected a short-range beam which induced in the first metallic body in its path currents which established the protective field as a hemisphere about that body?

Dear Mr. Campbell:

To me the stories in Astounding fall into three classes—good, mediocre, or bad. I classify bad stories as those I think are too worthless to be published. The bulk of the yarns I read are mediocre. I have a clear-cut method of identifying a good story. If, as I finish it, I feel the urge to read it again, then it is good.

Being very critical, stories I

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find good are far between. There has been only one in the last four issues—August to November, inclusive. This one, "The Second Solution," in the October issue, more than made up for the bulk of mediocre ones. I read it an even dozen times. It had "what it takes" to make a story: action, conflict and good writing. The conflict was more mental than physical, which made the story all the more interesting.

As an engineer whose business it is to apply physical principles for the well-being of men, my likes in fiction lean strongly toward the factual side, or at least follow in the directions pointed out by known—proven—physical laws, or very probable theories. For instance, in Cleve Cartmill's "Overthrow," I can readily understand how the secret weapon of the outlaws could be projected as a hemispherical shell with radii equidistant from the control box, as related as taking place at the scene of the holdup and on the island, in part. But how such a wall could be projected in hemispherical form with the control box outside the shell is quite beyond my powers of comprehension, even though I readily understand why it could destroy animal or vegetable life without destroying the sand or the air. It could be made to dissociate water and/or the hydrocarbon compounds of which the bodies of animals and men are made, let us suppose. Maybe I'd better quit before this runs into a scientific dissertation.—George Holman, Marissa, Illinois.

Well, Willy isn't much of a cook—

Dear Mr. Campbell:

"Nerves" was undoubtedly the best story in the September issue. It was *real* all through, and it's refreshingly different to have an author with a knowledge of modern surgery.

The others run as follows:

2. "Barrier"—Boucher.

3. "With Flaming Swords"—Cartmill.

4. "Death Under the Sea"—Ley.

5. "The Twonky"—Padgett.

6. "Pride"—Jameson.

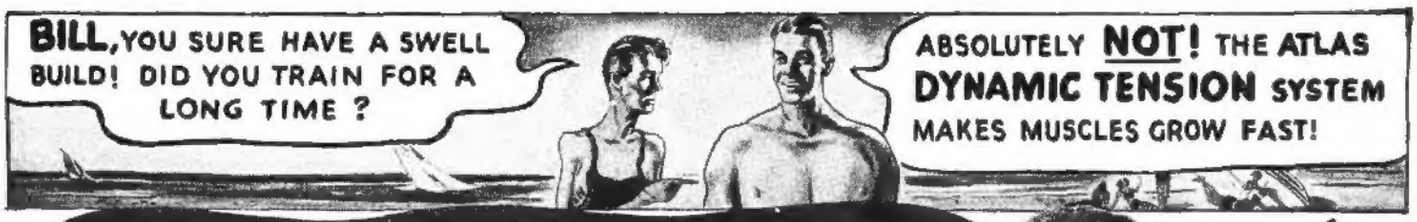
7. "Starvation"—Brown.

"Barrier" was one of the best-written yarns you've published for some time, and certainly the most original thing in time travel for many moons. Also, I liked the way Derringer prepared Brent for the journey. Instead of just handing him a gun and twenty rounds and wishing him good luck, Derringer prepared him scientifically. He wanted a man with quick wits, agile, and having "social adaptability," a knowledge of history and languages. These things, of course, are imperative to a time traveler, but how many authors bother to mention them?

Is there nothing that Willy Ley can't write about? His article on undersea warfare was even better than that on bombing. I was interested to know that magnetic mines were bomb-shaped, as I'd always thought they resembled the usual species. It was also interesting to learn that the North Sea Barrage was mainly a United States job. A pity Ley didn't have any data on acoustic mines—I'd like to know how they're counteracted. Sir C. D. Burney, who invented the paravane, also built the airship R100 and is at present pushing a scheme for flying aircraft carriers holding pusher fighters in their wings.

How about following up now with an article on mechanized land warfare? And talking about articles, where's de Camp? He's turned out some wizard works.

Too bad Rogers has left the cover, but it will give new artist a chance. Timmins wasn't so hot, and I'm looking forward to von Munchhausen's astronomical. Why not try Orban on the cover?—Robert J. Silburn, The Dingle, Rhydyfelin, Aberystwyth, Wales, Britain.



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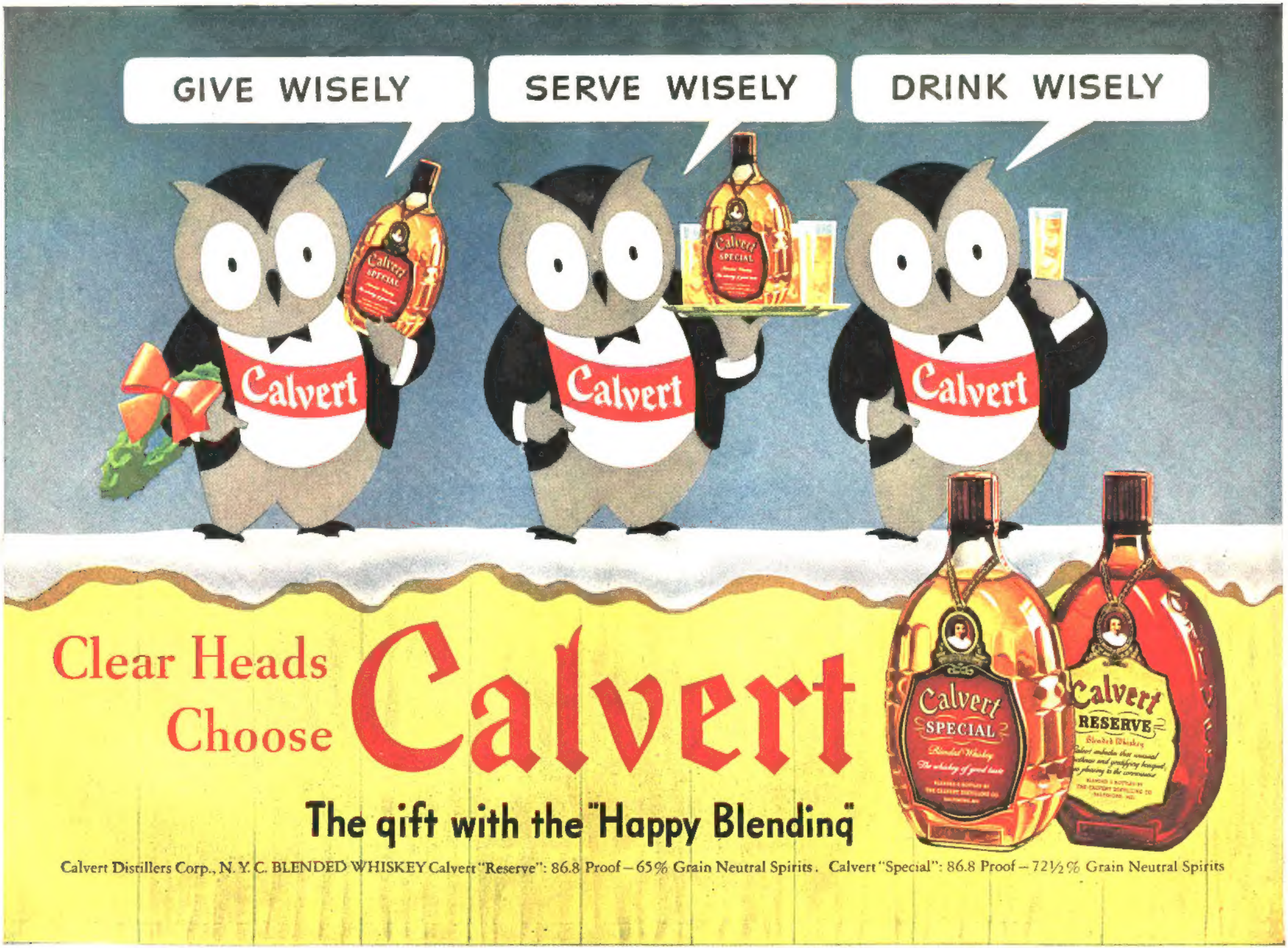

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